EPA WORK ASSIGNMENT NO: 076-2JZZ
EPA CONTRACT NO: 68-W8-0110
FOSTER WHEELER ENVIRONMENTAL CORPORATION
ARCS II PROGRAM

FINAL
SITE INSPECTION PRIORITIZATION (SIP)
BROCKWAY MOTOR TRUCKS SITE
CORTLAND
CORTLAND COUNTY, NEW YORK
CERCLIS NO: NYD980203111

SEPTEMBER 1995

VOLUME I OF II

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FOSTER WHEELER ENVIRONMENTAL CORPORATION

September 30, 1995
ARCS II-95-076-1338

Ms. Catherine Moyik
Work Assignment Manager
U.S. Environmental Protection Agency
290 Broadway, 18th Floor
New York, New York 10007

SUBJECT: ARCS II PROGRAM - EPA CONTRACT 68-W8-0110
WORK ASSIGNMENT NO. 076-2JZZ-PREREMEDIAL INVESTIGATIONS
SITE INSPECTION PRIORITIZATION FINDINGS
BROCKWAY MOTOR TRUCKS SITE

Dear Ms. Moyik:

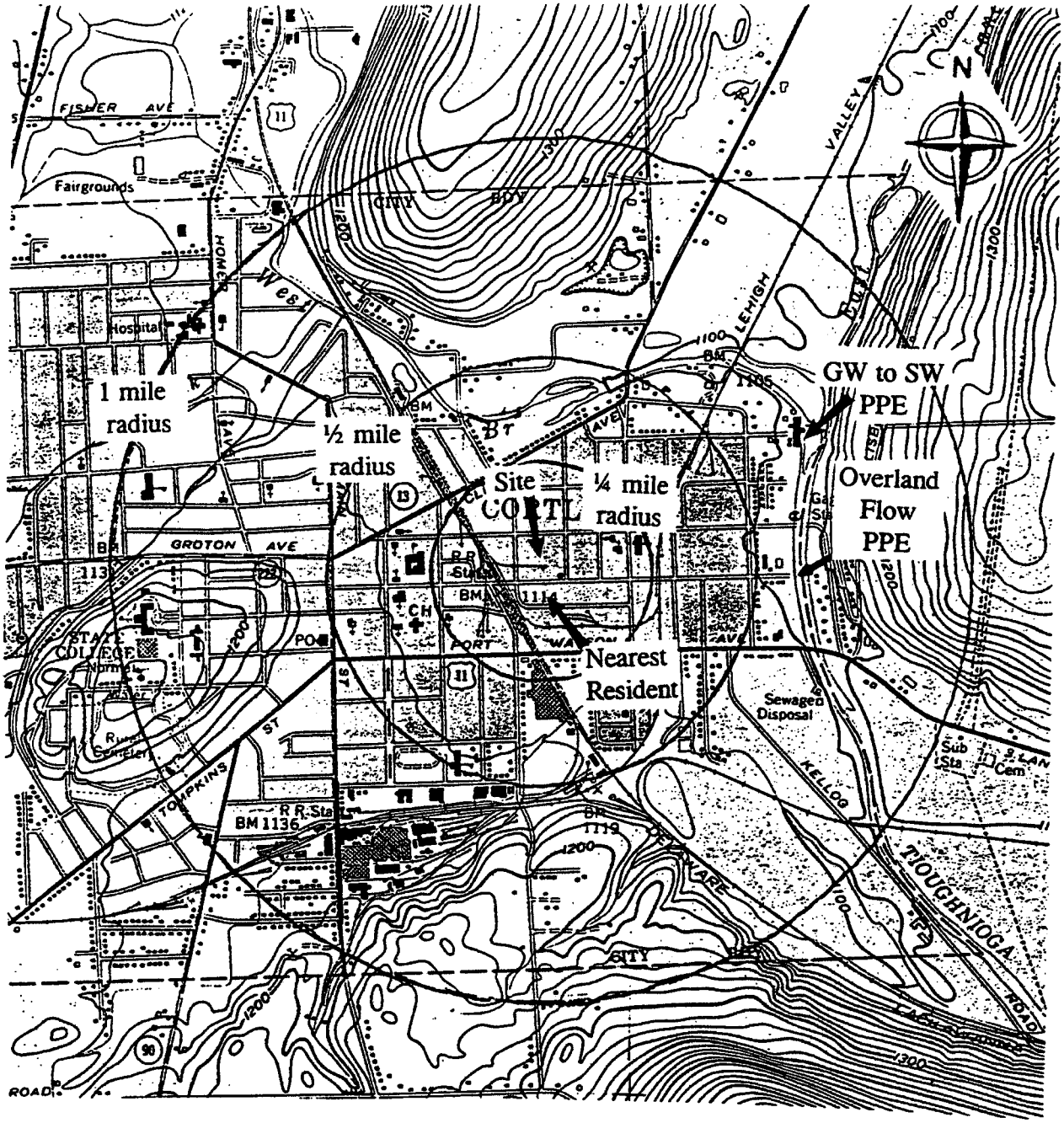
The following is a summary of the Site Inspection Prioritization (SIP) evaluation of the Brockway Motor Trucks site, CERCLIS No. NYD980203111, located on 106 Central Avenue, Cortland, Cortland County, New York.

General Description and Site History

The Brockway Motor Trucks site is an approximate 15-acre parcel bound by East Court Street to the south, DL&WRR railroad tracks to the west, a beer distributer on the northwest corner, Elm Street to the north, and Hubbard Street/Central Avenue/Dio Way to the east (Ref. 3, p. 1 of 1; Ref. 23, pp. 2 and 4 of 4). The site is currently owned by the Cortland County Industrial Development Agency (CCIDA) and is operated by Rubbermaid, Inc. (Ref. 8, pp. 4 and 4 of 38; Ref. 22, pp. 1 through 4 of 4). Across the railroad tracks are commercial areas (Ref. 8, pp. 31 through 35 of 38). The area of the site is relatively flat with a gentle slope to the east (Ref. 3, p. 1 of 1). The majority of the site is covered with either buildings or parking lots (Figure 2). There are approximately 460,000 square feet of warehouses on the property (Figure 2). The site location is presented in Figure 1. A detailed site map is depicted in Figure 2.

Brockway Motor Trucks (Brockway) was operating on a portion of the site in Cortland from 1915 to approximately 1977 (Ref. 8, p. 4 of 38; Ref. 24, pp. 3 through 18 of 18). Brockway's operation included assembly and painting of trucks (Ref. 16, p. 1 of 4; Ref. 24, pp. 3 through 18 of 18). In 1977 Brockway ended its operation in Cortland and at that time Mack Trucks was the parent company to Brockway (Ref. 22, pp. 1, 2 of 4). In the late 1970s, Mack Trucks sold the property (including the portion which is considered the Brockway Motor Trucks site) previously occupied by Brockway into smaller parcels (Ref. 22, pp. 1 through 4 of 4). A site map depicting the facility property included five areas as presented in Figure 3 (Ref. 16, p. 3 of 4). Of these five areas, only Area E on Figure 3 has been the focus of previous investigations (Ref. 30, p. 2 of 4).

8 PEACH TREE HILL ROAD, LIVINGSTON, NJ 07039
TEL: 201-597-7000 FAX: 201-597-7025



Site Location Map

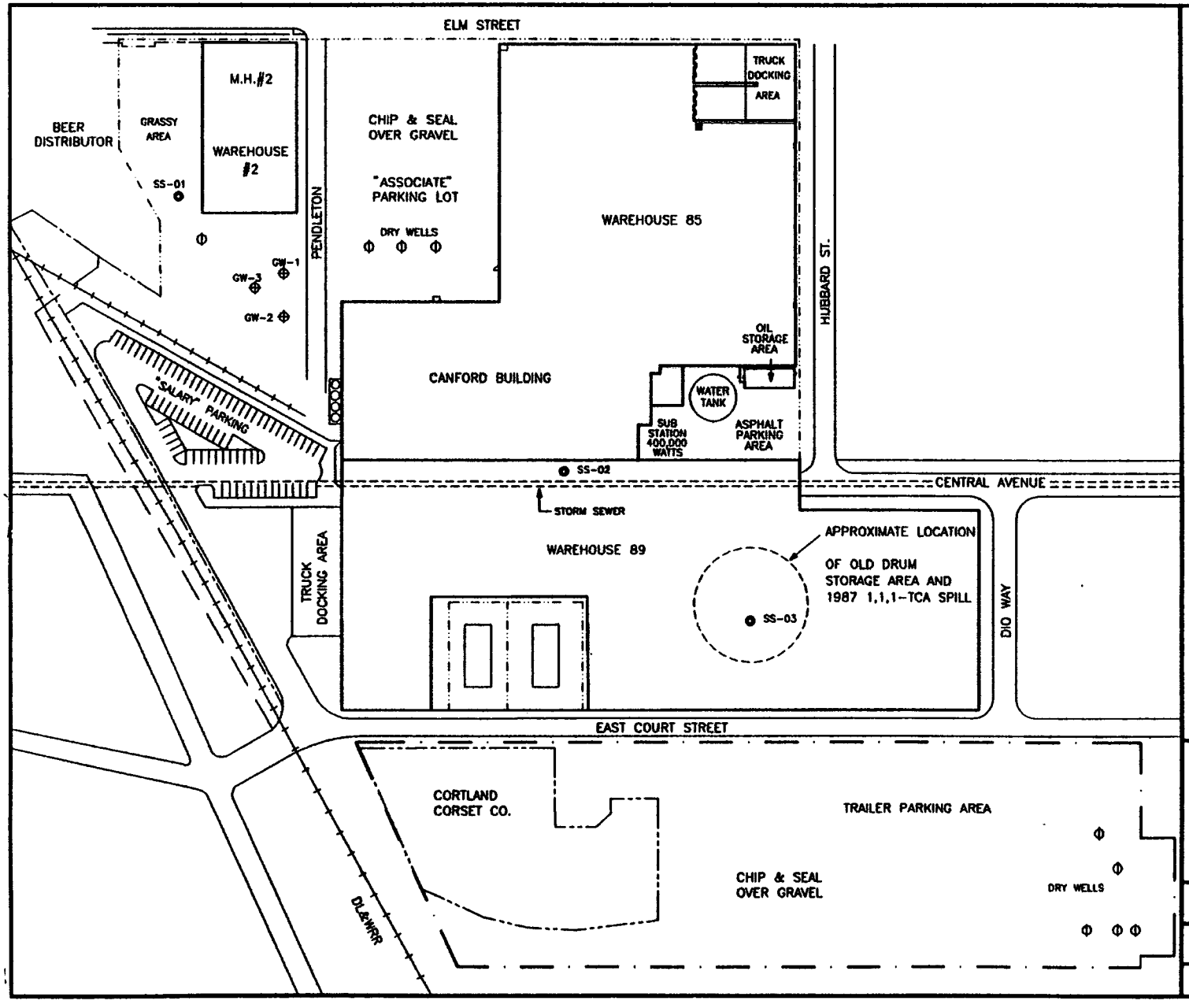
Brockway Motor Trucks Site

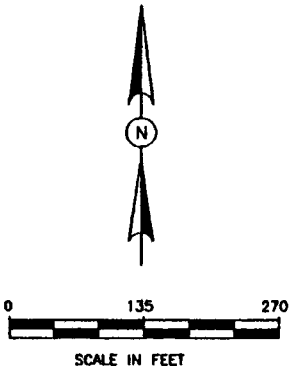
Scale: 1 inches = 2,000 feet

Source: 7.5 minute USGS map for Cortland, NY.

Ebasco Environmental

Figure 1





LEGEND

GW-1 ⊕ MONITORING WELL LOCATIONS

Φ DRY WELL LOCATIONS

SS-03 ● SOIL SAMPLE LOCATIONS

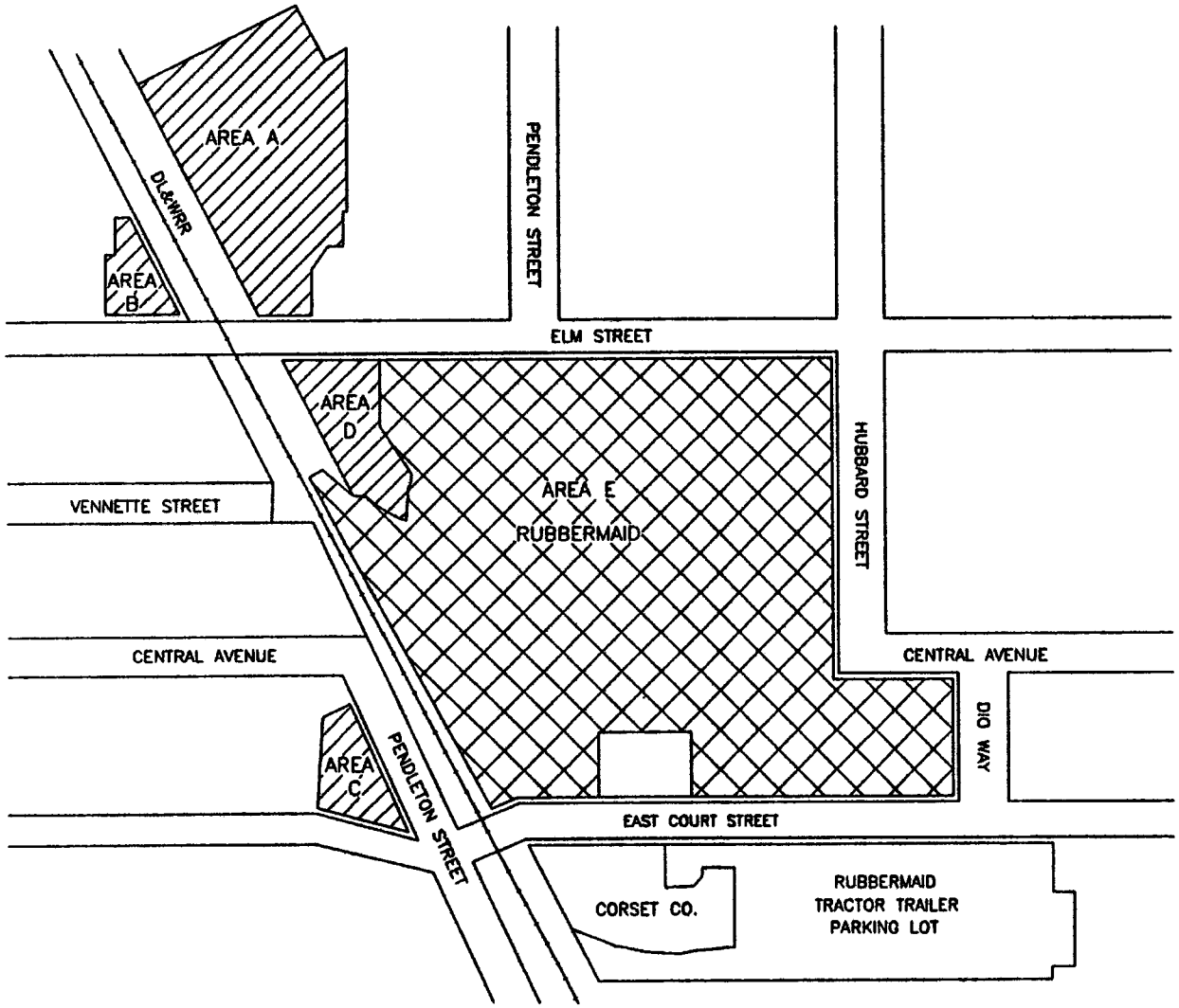
FIGURE 2
SITE DETAIL MAP
BROCKWAY MOTOR TRUCKS SITE

EBASCO Environmental

Source: Rubbermaid Overall Site Plan 4/88

DATE: 8/95

FILENAME: ARCSDOC\ACAD\BROCK3



BROCKWAY MOTOR TRUCKS SITE AS DEFINED BY EPA NOTIFICATION OF HAZARDOUS WASTE SITE FORM MODIFICATION

PORTION OF BROCKWAY MOTOR TRUCKS SITE FOCUSED ON IN PAST INVESTIGATIONS

NOTE: NOT TO SCALE

Source: Tax Block Maps – City of Cortland, NY, Map 86.51, 86.52, 86.59 and 86.80.

FIGURE 3
PROPERTY MAP
BROCKWAY MOTOR TRUCKS SITE
CORTLAND, NY

EBASCO Environmental

DATE: 6/95 DRAWN BY: J.H. D:\ARCSDOC\BROCK3

The largest portion of the former Brockway Motor Trucks property (Area E) is currently owned by CCIDA and operated by Rubbermaid, Inc. (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). This property has been the focus of previous investigations for the Brockway Motor Trucks site (Ref. 29, pp. 1 and 2 of 2; Ref. 30, p. 2 of 4). As depicted in Figure 3, the small parcels of Areas A, B, C, and D have not been established as areas of concern. Brockway Motor Trucks owned this entire area in 1976 (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). Prior to the ownership by CCIDA, Frederick G. Compagni owned a portion of the site from 2/26/80 to 3/20/85 (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). Also, Paul A. Sepe and Georgianna T. Sepe owned a portion from 3/7/79 to 6/4/85 (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). Canford Manufacturing, Co. bought a portion of the property from Mack Trucks on 2/26/80 (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). On 4/1/80, this portion was transferred to CCIDA (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). In 1985, Canford Manufacturing, Co. bought the property owned by Paul A. Sepe and Georgianna T. Sepe, and the property owned by Frederick G. Compagni (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4). All of this property was transferred to Rubbermaid and then to CCIDA in 8/88 (Ref. 22, pp. 1 and 2 of 4; Ref. 23, pp. 2 and 4 of 4).

In June 1972 Brockway Motor Trucks, in response to a letter from the Department of Highways, Cortland County, indicated they were generating approximately 100 gallons of "junk" paint thinner and paint rags (Ref. 13, p. 1 of 1).

In June 1981, Mack Trucks submitted a Notification of Hazardous Waste Site form to the USEPA for the Brockway Motor Trucks site (Ref. 16, pp. 1 through 4 of 4). Mack Trucks indicated the operation at Brockway included the generation of inorganic, solvent, heavy metal, acid and base wastes (Ref. 16, pp. 1 and 2 of 4). Mack Trucks also indicated the use of tanks, underground injection and drums at the facility (Ref. 16, pp. 1 and 2 of 4). No additional information has been made available regarding specific hazardous substances utilized by Brockway Motor Trucks (Ref. 25, p. 1 of 1).

In the past Rubbermaid's operations have included the use of 1,1,1-trichloroethane (1,1,1-TCA) (Ref. 12, pp. 1 and 2 of 3). Currently, Rubbermaid uses hydraulic oil and "XKleen" (a high grade of Safety Kleen) (Ref. 8, p. 5 of 38). No toxic metals such as lead, chromium and cadmium are used at the site (Ref. 8, p. 5 of 38). Wastes generated by Rubbermaid include hydraulic waste oil, some paint, some "WD40", and "XKleen" (Ref. 8, p. 5 of 38). The wastes generated at Rubbermaid are disposed of as a small quantity generator, and Safety Kleen is contracted to remove waste from the site (Ref. 8, p. 5 of 38). Other materials on-site include propane tanks for the fork lifts, fork lift batteries, Betz Cintex for water treatment (fungicide/bactericide), compressed gases for welding, polypropylene and polyethylene (Ref. 8, p. 5 of 38).

In July 1985, Rubbermaid removed seven storage tanks from their property (Ref. 26, p. 3 of 3). Another tank was removed in October 1986, while a ninth tank was permanently closed in December 1986 (Ref. 26, p. 3 of 3). Of these tanks, one was known to store diesel fuel, and two stored #4 fuel oil (Ref. 27, p. 1 of 1). There is no indication of the usage for the other five tanks.

During the installation of a dry well for drainage, Rubbermaid discovered an underground storage tank (UST) in 1986 (Ref. 17, p. 1 of 8). This tank was removed, and sludge and water samples were collected from the excavation and analyzed for benzene, toluene, and xylene (BTX) (Ref. 17, p. 1 of 8). The results of the analysis of the sludge indicated no detectable concentration of BTX; benzene at a concentration of 49 µg/L and xylene at a concentration of 1,760 µg/L were detected in the water sample (Ref. 17, p. 1 of 8). Additional analyses of the water sample indicated that the sample did not contain volatile halogenated compounds (Ref. 17, p. 1 of 8). Hydrocarbon identification testing tentatively identified the presence of gasoline in the water sample (Ref. 17, p. 1 of 8).

In November 1986, Thomsen Associates installed three monitoring wells in the area of the removed tank on behalf of Canford Manufacturing, Co. (Ref. 17, pp. 1, 2, 5, 6 through 8 of 8). Analysis of samples from the monitoring wells did not indicate the presence of hydrocarbon contamination of the groundwater (Ref. 17, pp. 1 through 3 of 8).

On February 5, 1987, a spill of 1,1,1-TCA occurred on the site (Ref. 12, p. 2 of 3). A 55-gallon drum was being transported from a drum storage area when it ruptured (Ref. 12, p. 1 of 3). Approximately 35 gallons of 1,1,1-TCA were spilled onto the ground (Ref. 12, p. 2 of 3). The New York State Department of Environmental Conservation (NYSDEC) arrived on the site the same day and supervised the cleanup activities (Ref. 12, p. 3 of 3). The NYSDEC records incorrectly list the spill as a chloroethane spill (Ref. 12, pp. 1 and 2 of 3). According to the NYSDEC, the spill was considered closed and the cleanup completed (Ref. 12, pp. 1 and 2 of 3).

On February 24, 1987, NUS completed a Preliminary Assessment (PA) at the property for the USEPA (Ref. 29, p. 2 of 2). Due to the potential for contamination of the groundwater, surface water, soil, and sanitary sewer system, a Site Inspection was recommended (Ref. 29, p. 2 of 2).

On July 8, 1987, NUS completed a Site Inspection (SI) (Ref. 9, p. 1 of 60). The SI included the collection of three surface soil samples and three groundwater samples collected from the monitoring wells previously installed in the area of an excavated tank (Ref. 30, pp. 1 through 4 of 4). The soil and groundwater samples were analyzed for CLP volatiles, semi-volatiles, pesticides/PCBs and metals. The three soil samples were collected as follows: one soil sample (S-1) was collected from an area just northwest of the removed UST, one soil sample (S-2) from an area just north of Central Avenue and east of an excavated UST, and one soil sample (S-3) from the old drum storage area (the area where the 1,1,1-TCA spill occurred) (Ref. 30, pp. 3 and 4 of 4). As there was no off-site background sample collected, the least contaminated sample (S-1) was utilized for background purposes. The results from the soil sampling indicated the presence of volatile organic compounds (VOCs) including 1,1-dichloroethane at 8 µg/kg and 1,1,1-TCA at 930 µg/kg; of semi-volatile organic compounds (SVOCs) including phenanthrene at 250 µg/kg, fluoranthene at 620 µg/kg, pyrene at 530 µg/kg, benzo(a)anthracene at 260 µg/kg, chrysene at 330 µg/kg, benzo(b)fluoranthene at 440 µg/kg. Lead was detected at 353 mg/kg (Ref. 9, pp. 42 through 60 of 60). The results of the groundwater sampling indicated the presence of lead at a maximum concentration of 323 µg/L (Ref. 9, pp. 3 through 21 of 60).

Another source of 1,1,1-TCA and 1,1-dichloroethane has been identified in the vicinity of the site.

Evaluation of Existing Information

Existing information and analytical data from the NUS SI sampling were used to complete an initial evaluation of the Brockway Motor Trucks site. The existing information indicates the presence of site-related contaminants in the site's groundwater and soil. The groundwater samples collected during the 1987 SI indicate the presence of lead in the downgradient monitoring wells at concentrations three times that in the upgradient monitoring well. However, no source of lead has been identified at the site. The wells were located in the vicinity of a removed UST. Post-excavation sampling of the water collected from this UST excavation indicated the presence of gasoline. Due to the location of the monitoring wells in the excavated UST area, the only probable source for the lead would be leaded gasoline. Lead has not been included in the site evaluation due to the petroleum exclusion of gasoline products from CERCLA evaluations.

The only soil contaminant that is attributable to hazardous substances documented to be used at the site is 1,1,1-TCA. This VOC was detected in sample S-2 at a concentration 930 µg/kg, three times background. The other VOCs detected in the soil samples were excluded from the site evaluation as their use on the site has not been documented. The SVOCs detected from the soil samples have also been excluded; these samples were collected near roads and/or parking lots and closed tanks containing petroleum. The areas where the soil samples were collected is currently covered by warehouses or pavement (see Figure 2).

The chemical data from the investigations conducted at the Brockway Motor Trucks site were used for screening purposes and not to support an HRS score since it lacks the proper QA/QC documentation.

Hazard Assessment

Updated and additional information and data were collected to further evaluate the site to determine the need for CERCLA remedial action. This information and data collected included reports on past investigations, 4-mile radius populations, the potable water supply, and wetland and sensitive environments information.

Source Description

The only source identified at the Brockway Motor Trucks site is contaminated soil associated with sample location S-2 (Ref. 30, p. 2 of 4). The hazardous substance associated with the source is 1,1,1-TCA at a concentration of 930 µg/kg. The exact depth at which sample S-2 was collected is not documented. For evaluation purposes, the area associated with the contaminated soil has been assigned a minimum value of one square foot.

Groundwater Pathway

The groundwater pathway is evaluated on a potential-to-release basis.

Stratigraphy underlying the site consists of two aquifers which are used for drinking water supplies: the fill/surficial outwash aquifer and the lower outwash aquifer. Underlying the shallow outwash aquifer are lacustrine deposits and underlying the lower outwash aquifer are till/genesee formations (Ref. 20, pp. 6 and 7 of 20). The fill/surficial outwash aquifer exists from the surface to an average depth of 44 feet. This aquifer consists of sand, gravel silt and trace cinders (Ref. 17, pp. 5 through 8 of 8; Ref. 19, pp. 1 through 3 of 3; Ref. 20, pp. 1 through 7, 14 through 16, 19 of 20). The groundwater table is from 8.5 to 9.0 feet below ground surface at the site (Ref. 17, p. 5 of 8). These deposits have a conductivity value of 1×10^{-4} cm/sec (Ref. 1, p. 1 of 1). Groundwater flow direction is generally toward the Tioughnioga River (Ref. 20, p. 20 of 20). The fill/surficial outwash aquifer is used for drinking water to supply some of the local municipal water (Ref. 15, pp. 1 and 2 of 3; Ref. 31, pp. 1 through 6 of 8).

Lacustrine deposits consisting of silt and clay underlie the fill/surficial outwash aquifer (Ref. 20, pp. 5 through 8 of 20). These deposits range in depth from 44 feet below ground surface to a depth of 139 feet (Ref. 20, pp. 1 through 8 of 20). The lacustrine unit has a conductivity value of 1×10^{-6} cm/sec (Ref. 1, p. 1 of 1). This unit is not known to be used for drinking water purposes and, therefore, is not being included in the site evaluation.

The lower outwash aquifer underlies the lacustrine deposits (Ref. 20, pp. 6 through 9 of 20). This aquifer exists in depth from 139 feet to 215 feet (Ref. 20, pp. 6 through 9 of 20). The aquifer consists of sand and gravel deposits and has a conductivity value of 1×10^{-4} cm/sec (Ref. 1, p. 1 of 1; Ref. 20, pp. 1 through 9 of 20). The general flow direction of this aquifer is toward the Tioughnioga River (Ref. 20, p. 12 of 20). This aquifer is used to draw the drinking water supply for the Village of McGraw (Ref. 31, pp. 7 and 8 of 8).

Till/Genesee group formations consisting of silt and clay with sand and gravel intermixed and shale underlie the lower outwash aquifer (Ref. 20, pp. 1 through 9 of 20). This formation is 100+ feet thick, ranging in depth from 215 feet to 315+ feet, and has a conductivity value of 1 x 10-8 cm/sec (Ref. 1, p. 1 of 1; Ref. 20, pp. 1 through 4, 6, 7, 9, 10, 17 of 20). This unit is not known to be used for drinking water purposes and, therefore, is not being included in the site evaluation.

Groundwater in the Cortland area is used for drinking water for private and municipal purposes. The Cortland Water Board supplies potable water to a total of 20,000 people with three wells located 1.25, 1.3 and 1.3 miles, respectively from the site (Ref. 15, p. 1 of 3). The Cortlandville Water Department supplies potable water to a total of 4,000 people with three wells located 2.5 miles from the site and one well located 3.8 miles from the site (Ref. 15, pp. 1 and 2 of 3). The Newton Water Works supplies potable water to a total of 4,400 people with one well located 3.1 miles from the site (Ref. 15, pp. 1 and 2 of 3). These municipal supply wells withdraw water from the fill/shallow outwash aquifer (Ref. 31, pp. 1 through 6 of 8).

Available information indicates that there are approximately 3,200 people using private wells and 28,400 using municipal supply wells for a drinking water supply withdrawing from the fill/shallow outwash aquifer within four miles of the site as follows: 0 to 0.25 mile, 0; 0.25 to 0.50 mile, 3; 0.50 to 1 mile, 46; 1 to 2 miles, 20,734; 2 to 3 miles, 3,026; and 3 to 4 miles, 7,791 (Ref. 5, pp. 9, 10 of 10; Ref. 15, pp. 1 to 3 of 3). For evaluation purposes all of the people on private wells have been attributed to the fill/surficial outwash aquifer.

The Village of McGraw supplies potable water to a total of 1,300 people with two wells located 3.8 miles from the site (Ref. 15, p. 2 of 3). These municipal supply wells withdraw water from the lower outwash aquifer (Ref. 31, pp. 7 and 8 of 8). The population attributed to each aquifer is as follows: 31,600 people to the fill/shallow outwash aquifer and 1,300 people to the lower outwash aquifer (Ref. 15, pp. 1, 2 of 3; Ref. 31, pp. 1 through 8 of 8). There is no wellhead protection area around any of the municipal wells (Ref. 28, p. 1 of 1).

Surface Water Pathway

The surface water pathway is evaluated on a potential-to-release basis. The probable point of entry (PPE) for the overland flow component of the surface water pathway was considered the shortest distance from the source to the nearest qualifying surface water body which is the Tioughnioga River located approximately 2,900 feet east of the site (Ref. 4, p. 1 of 1).

Drainage from the roofs of the warehouses and the "Salary" Parking Lot (see Figure 2) will enter the storm sewer running under the site (Ref. 8, pp. 6, 13 of 38). The runoff from the "Associate" Parking Lot and the trailer parking area (see Figure 2) will enter the groundwater table via dry wells (Ref. 8, p. 4 of 38). The storm sewer under Central Avenue runs due east to the Tioughnioga River (Ref. 8, pp. 8 and 11 of 38). The Tioughnioga River is a moderately flowing water body with an average flow of 498 cubic feet per second (cfs) (Ref. 10, p. 3 of 3). The surface water target distance limit (TDL) extends 15 miles downstream from Cortland to Marathon, NY (Ref. 4, p. 1 of 1). The 2-year, 24-hour rainfall total is three inches (Ref. 18, p. 2 of 2).

There is only one surface water segment in the Tioughnioga River. No surface water intakes used for drinking water or known sensitive environments are located along the segment (Ref. 6, p. 2 of 5; Ref. 28, p. 1 of 1). The Tioughnioga River is classified as a Class B fresh surface water (Ref. 32, p. 2 of 2). A total of 4.83 miles of wetland front are located along the Tioughnioga River (Ref. 4, p. 1 of 1). The Tioughnioga River is stocked with brown trout yearly and is used as a fishery (Ref. 11, pp. 1 and 3 of 3). The Brockway Motor Trucks site is not located within any floodplain (Ref. 7, p. 3 of 3).

Soil Exposure Pathway

The areas where the soil samples were collected, including sample S-2 used to characterize the source, is currently covered by warehouses or pavement (see Figure 2). The presence of the buildings and pavement preclude the existence of an area of observed contamination. The soil exposure pathway was not included in the evaluation of the site.

Rubbermaid employees approximately 400 workers at their Cortland facility (Ref. 8, p. 5 of 38). There are no wetlands, terrestrial sensitive environments, day-care centers or schools within 200 feet of the site (Ref. 3, p. 1 of 1). An adjacent residence is located within 200 feet south of the site (Ref. 8, pp. 27 and 28 of 38; Ref. 27, p. 1 of 1). Census bureau derived data indicates a population of 1,321 within the 0 to 0.25 mile radius of the site, 2,924 people within the 0.25 to 0.50 mile radius of the site and 9,292 people within the 0.50 to 1 mile radius of the site (Ref. 5, pp. 9 and 10 of 10). There is a fence surrounding the Rubbermaid facility (Ref 8, p. 17 of 38).

Air Pathway

Air samples were not collected in conjunction with any investigations at the site. During the July 8, 1987 sampling event, no readings were detected by the HNu. The air pathway was not evaluated since the identified source at the site is covered by a building. The building acts as an impermeable, regularly inspected, maintained cover.

There are approximately 29,754 people within four miles of the site as follows: 0 to 0.25 mile, 1,321; 0.25 to 0.50 mile, 2,924; 0.50 to 1 mile, 9,292; 1 to 2 miles, 7,734; 2 to 3 miles, 5,550; and 3 to 4 miles, 2,935 (Ref. 5, pp. 9 and 10 of 10). The nearest residence/regularly occupied building is the Rubbermaid warehouse which is located on the site (Ref. 8, p. 13 of 38).

The presence of wetlands was evaluated for the air pathway TDL as follows: 0 acres within the 0 to 0.25 mile radius, 0 acres within the 0.25 to 0.50 mile radius, 7.35 acres within the 0.50 to 1 mile radius, 75.76 acres within the 1 to 2 mile radius, 82.64 acres within the 2 to 3 mile radius and 171.99 acres within the 3 to 4 mile radius (Ref. 21, p. 1 of 1). There are no threatened or endangered species located within the air pathway TDL (Ref. 6, p. 2 of 5).

Summary

The existing information and newly collected data are sufficient to evaluate the site. Groundwater underlying the site is utilized extensively for supplying drinking water via private and municipal wells within the 4-mile TDL.

Drainage for the site flows to two areas: Tioughnioga River and directly into the groundwater table. The drainage from the roofs of buildings enters the storm sewer directly and is discharged in the Tioughnioga River. The drainage from the trailer parking area and the "Associate" parking lot is received by the dry wells on-site. There are no surface water intakes within the surface water pathway TDL. The Tioughnioga River is a fishery and is classified as a Class B fresh surface water. A total of 4.83 miles of wetland front are located along the Tioughnioga River.

The soil exposure pathway was not evaluated since there is no area of observed contamination as the source is covered by a building. There were no areas of observed contamination identified within the property boundary of any residences, or terrestrial sensitive environments. A fence surrounds the Brockway Motor Trucks site. An adjacent residence is located within 200 feet south of the Brockway Motor Trucks site. There are approximately 400 workers present at the site.

The air pathway was not evaluated since the identified source is covered by a building which acts as an impermeable, regularly inspected, maintained cover.

Prepared by:

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Reviewed by:

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Ebasco Services Incorporated

REFERENCES

1. U.S. Environmental Protection Agency (EPA), Hazardous Ranking System (HRS), Final Rule, 40 CFR 300, Vol. 55, No. 241, December 14, 1990.

2. U.S. Environmental Protection Agency, Superfund Chemical Data Matrix (SCDM), EPA 9360.4-18, July 1994, as incorporated in the PREscore Software Version, 3.0, Publication 9450.2200, August 1994.

3. Four-Mile Radius Vicinity Map, Brockway Motor Truck Site, Cortland, Cortland County, NY, compiled from U.S. Department of the Interior (DOI) Geological Survey Topographic Maps: "Cortland, NY," 1955; "McGraw, NY," 1955 (photo revised 1979, minor revision 1994); "Groton, NY," 1970; "Truxton, NY," 1955 (photo inspected 1977); "Homer, NY," 1955 (photo revised 1978); "Sempronius, NY," 1977.

4. 15-Mile Surface Water Pathway/Wetland Map, Brockway Motor Trucks Site, Cortland, Cortland County, NY, compiled from U.S. DOI Fish and Wildlife Service National Wetland Inventory (NWI) Maps: "Cortland, NY," undated; "McGraw, NY," undated; "Homer, NY," undated; "Truxton, NY", undated; "Marathon, NY," undated.

5. Frost Associates, CENTRACTS Report for Brockway Motor Trucks Site based on 1990 Census Bureau STF-1A and STF-3A files, February 1995.

6. Letter from Information Services, New York Natural Heritage Program, to Jeff Martin, Ebasco. January 26, 1995.

7. Flood Insurance Rate Map, City of Cortland, Cortland County, NY, Community-panel number 360178 0001 C, Federal Emergency Management Agency, August 15, 1983.

8. Ebasco Services Incorporated. Field Logbook, On-Site Reconnaissance, Brockway Motor Trucks Site, March 21, 1995

9. NUS, Site Investigation, Brockway Motor Trucks Site. Analytical Data. July 1987.

10. United States Geological Survey (USGS) Water Data Report NY-93-3, Water Resources Data, Vol. 3, Western New York, Water Year 1993.

11. New York State Department of Environmental Conservation (NYSDEC) Region 7 - Fish Stocking List, January-December 1994.

12. NYSDEC, Oil & Hazardous Material Spill - Fact Sheet, April 29, 1995 (Spill number: 8606796), and Field Notes.

REFERENCES (Cont'd)

13. Letter form Leo Mahar, Brockway Motor Trucks, to Ralph Pitman, Department of Highways, Cortland County, June 20, 1972.

14. Map indicating water distribution areas from Douglas Withey, Cortland County Board, to Jeff Martin, Ebasco, February 13, 1995.

15. Letter from Peter Rynkiewicz, Cortland County Health Department, to Jeff Martin, Ebasco, March 10, 1995.

16. Notification of Hazardous Waste Site form for Brockway Motor Trucks, submitted by Kenneth A. Blythe, Mack Trucks, June 8, 1981.

17. Letter report for Hydrocarbon Investigation by Thomsen Associates, to William Lewis, Rubbermaid, December 11, 1986.

18. United States (U.S.) Department of Commerce. Rainfall Frequency Atlas of the U.S. for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years. May 1961.

19. United States (U.S.) Department of Agriculture. Soil Survey of Cortland County, NY May 1961.

20. United States (U.S.) Geological Survey. Hydrogeology of the Surficial Outwash Aquifer at Cortland, Cortland County, New York. 1987.

21. 4-Mile Air Pathway Wetland Map, Brockway Motor Trucks Site, Cortland, Cortland County, NY, compiled from U.S. DOI Fish and Wildlife Service National Wetland Inventory (NWI) Maps: "Cortland, NY," undated; "McGraw, NY," undated; "Homer, NY," undated; "Truxton, NY", undated.

22. Letter from Cortland County Real Property Tax Service (RPTS) to Jeff Martin, Ebasco, January 24, 1995.

23. Tax Block Maps, City of Cortland, Cortland County, NY, Map 86.52, August 1993; Map 86.51, February 1994; Map 86.59, October 1992; Map 86.60, March 1993.

24. Brockway Motor Trucks Site Sanborn Maps, provided by Environmental Risk Information & Imaging Services (ERIIS), Report number 33005A, May 24, 1995.

25. Letter from T. R. Wilcox, Mack Trucks, to Jeff Martin, Ebasco, March 17, 1995.

26. Letter from William Lewis, Rubbermaid, to John Ducar, NUS, July 23, 1987.

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27. Site map obtained from Jack Grimmer, Rubbermaid, no date.

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31. Boring Logs for municipal wells. Cortlandville Well #3; Cortlandville Lime Hollow Well; Village of McGraw Wells; Homer Well #3; Cortland Water Board Well #3 and #4.

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Reference 1

12-14-90
Vol. 55 No. 241

federal register

Friday
December 14, 1990

Book 2

United States
Government
Printing Office
SUPERINTENDENT
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SECOND CLASS NEWSPAPER

Postage and Fees Paid
U.S. Government Printing Office
(ISSN 0097-6326)

Reference 2

EPA

Superfund Chemical Data Matrix

Reference 3

Site
PPE
¼ mile radius
½ mile radius
1 mile radius
2 mile radius
3 mile radius
4 mile radius
Nearest Resident
Four Mile Radius
Site Vicinity Map
Brockway Motor Trucks Site
Scale: 1 inches = 2,000 feet
Source: 7.5 minute USGS maps
for Cortland, NY; McGraw, NY;
Truxton, NY and Homer, NY
CORTLANDVILLE
Homer
Cortland
McGraw
Virgil
SCALE 1:24000
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
U. S. Route
State Route
CORTLAND, N. Y.
42076-E2-TF-024
1955
DMA 5769 II SW—SERIES V821
Mapped by the Army Map Service
Edited and published by the Geological Survey
Control by USGS and USC&GS, and TVA
Topography from aerial photographs by photogrammetric methods. Aerial photographs taken 1942. Field check 1943
Culture revised by the Geological Survey 1955
Polyconic projection. 1927 North American datum
10,000-foot grid based on New York coordinate system, central zone
Red tint indicates area in which only landmark buildings are shown
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue
UTM GRID AND 1955 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
To place on the predicted North American Datum 1983, move the projection lines 3 meters south and 28 meters west as shown by dashed corner ticks
Mapped by the Army Map Service
Produced by the U. S. Geological Survey
Control by USGS, NOS/NOAA, USCE and TVA
Topography by photogrammetric methods from aerial photographs taken 1942. Field checked 1944
Culture revised by the Geological Survey 1955
Projection and 10,000-foot grid ticks: New York coordinate system, central zone (transverse Mercator)
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue
1927 North American Datum (NAD 27)
North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are given in USGS Bulletin 1875
There may be private inholdings within the boundaries of the National or State reservations shown on this map
Photoinspected from 1992 source; no major culture or drainage changes observed. Boundaries and names revised 1994
UTM GRID AND 1994 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Reference 4

15-Mile Surface Water Pathway/
Wetland Frontage Map
Brockway Motor Trucks Site
Scale: 1 inches = 2,000 feet
Source: 7.5 minute USGS/NW" maps
for Cortland, NY; McGraw, NY;
and Marathon, NY
Site
P2E
¼ mile radius
½ mile radius
1 mile radius
2-mile radius
3 mile radius
4 mile radius
Indicates Wetlands Evaluated
Indicates Segment A
End of the 15-Mile TDL
CORTLANDVILLE
VIRGIL
FREETOWN
MARATHON
McGraw
Marathon
Pokeville
Carr Hill
Hicks Hill
South Cortland
Lapeer Church
ELMIRA NE
AUBURN
SCALE 1:24 000
DRAFT
SPECIAL NOTE
This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deepwater Habitats of the United
SYMBOLOGY EXAMPLE
SYSTEM
SUBSYSTEM
CLASS
NOTES TO THE USER
• Wetlands which have been field
on the map by an asterisk (*)
• Additions or corrections to the w
displayed on this map are solicit
information to the address indic
• Subsystems, Classes, Subclasse
CORTLAND CO
BROOME CO

Reference 5

FROST ASSOCIATES

P.O.Box 495, Essex, Connecticut 06426
(203) 767-7644 FAX (203) 767-1971

Feb 8, 1995

To: Edgar Aguado
Ebasco Services Inc.
1290 Wall Street West
P.O Box 661
Lyndhurst, New Jersey 07071

From: Bob Frost
Frost Associates
P.O. Box 495
Essex, Conn 06426

Tel: (203) 767-1254
Fax: (203) 767-7069

Sub: Brockway Motor Trucks
106 Central Ave, Cortland, NY

CERCLIS: NYD980203111

Job: 50042

Site Longitude: 76-10-20 76.172234
Site Latitude : 42-36-00 42.599998

The CENTRACTS report below identifies the population, households, and private water wells of each Block Group that lies within, or partially within, the 4, 3, 2, 1, .5, and .25, mile "rings" of the latitude and longitude coordinates above. CENTRACTS may have up to ten radii of any length. 1000 block groups, and 15000 block group sides.

CENTRACTS uses the 1990 Block Group population and Block Group house count data found in the Census Bureau's 1990 STF-1A files. The sources of water supply data are from the Bureau's 1990 STF-3A files. The boundary line coordinates of the Block Groups were extracted from the Census Bureau's 1990 TIGER/Line Files.

CENTRACTS reports are created with programs written by Frost Associates, P.O. Box 495, Essex, Conn. The code was written using Microsoft's Quick-Basic Ver. 4.5.

Latitude and Longitude coordinates identifying a site are entered in degrees and decimal degrees. One or more county files holding Block Group boundary lines are selected for use by CENTRACTS by determining whether the site coordinates fall within the minimum and maximum Lat\Lon coordinates of each county in the state.

Each Block Group line segment has Lat\Lon coordinates representing the "From" and "To" ends of that line. All coordinates from the selected county files are read and converted from degrees, decimal degrees to X\Y miles from the site location. Each line segment is then examined whether it lies within or partially within the maximum ring from the site.

The unique Block Group ID numbers of each line segment that lie within the maximum ring are retained. All Block Group boundary lines matching the Block Group numbers are then extracted from the respective county files to obtain all sides of the included Block Groups. Boundary records are then sorted in adjacent side order to determine the shape and area of each Block Group polygon.

A method to solve for the area of a polygon is to take one-half the sum of the products obtained by multiplying each X-coordinate by the difference between the adja-

Brockway Motor Trucks
Cortland, NY

cent Y-coordinates. For a polygon with coordinates at adjacent angles A, B, C, D, and E. The formula can be expressed:

rea = 1/2{Xa(Ye-Yb)+ Xb(Ya-Yb)+ Xc(Yb-Yd)+ Xd(Yc-Ye)+ Xe(Yd-Ya)}

or each ring, the selected Block Groups will be inside, outside, or intersected by he ring. When a polygon is intersected, the partial Block Group area within that ring is calculated using the method described below.

hen a ring intersects a Block Group, the intersect points are solved and plotted at he points where the ring enters and exits the shape. The chord line, a line within the circle connecting the intersect points is determined. This chord line is used to calculate the segment area, the half moon shape between the chord line and the ring, nd the sub-polygon created by the chord line and the Block Group boundaries that lie utside the ring.

he segment area is subtracted from the sub-polygon area to determine the area of the ub-polygon outside the ring. The area outside the ring is then subtracted from the rea of the entire polygon to arrive at the inside area. This inside area is then divided by the tract's total area to determine the percentage of area within the ing. This process is repeated for each block group that is intersected by one of the ings. The total area, partial area, and percentage of partial area of those block groups within, or partially within a ring, are held in memory for the report.

occasion, the algorithm described above is unable to determine the area of the artial area. Within the report program is a "Paint" routine which allows an enclosed shape to be highlighted. Another routine calculates the percentage of highlighted creen pixels to the pixels within the polygon. A manual entry is allowed. Both the paint" method and manual entry method over ride the calculated method.

CENTRACTS lists, starting on page 4, all Block Groups in State, County, Census Tract, nd Block Group ID order that lie within, or partially within, the maximum ring. Each lock Group is identified by a City or Town name and by the Block Group's State, ounty, Tract and Block Group ID number. Following is the Block Group's 1990 populu tion and house count extracted from the Census Bureau's 1990 STF-1A files.

he next four columns display water source data from the 1990 STF-3A files. The first column is "Units with Public system or private company source of water", followed by "Units with individual well, Drilled, source of water"; "Units with individual well, ug, source of water" and "Units with Other source of water".

For each ring, CENTRACTS then shows the Block Groups that are within that ring, the lock Group's total area in square miles, the partial area of the Block Group within hat ring, and the partial percentage within the ring. The areas of the included lock Group and the partial areas are then totaled.

he last section tallies the demographic data within each ring. The percentage of rea for each Block Group is multiplied times the census data for that Block Group and totaled for all Block Group's within the ring. Ring totals are then determined by subtracting the three mile data from the four mile, the two mile from the three ile, one from the two, etc... Population on private wells is calculated using the ormula: ((Drilled + Dug Wells) / Households) * Population

Brockway Motor Trucks
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No.	City	Block Group ID	Blk Grp	People	House Holds	Public Water	Drilled Wells	Dug Wells	Other
1	Homer	36023 9902	4	1525	560	71	26	430	20
2	Homer	36023 9902	5	1953	712	152	40	528	13
3	Homer	36023 9903	1	920	366	370	0	7	0
4	Homer	36023 9903	2	473	189	194	0	0	0
5	Homer	36023 9903	3	895	355	338	0	0	0
6	Homer	36023 9903	4	737	282	272	0	0	0
7	Cortlandville	36023 9904	1	1035	391	166	5	192	18
8	Cortlandville	36023 9904	2	1357	497	309	15	172	0
9	Cortlandville	36023 9904	3	738	262	41	19	175	20
10	Cortland	36023 9905	1	587	187	186	0	0	0
11	Cortland	36023 9905	2	891	401	379	0	5	0
12	Cortland	36023 9905	3	992	433	427	5	0	0
13	Cortland	36023 9905	4	796	335	344	0	0	0
14	Cortland	36023 9905	5	777	333	343	0	0	0
15	Cortland	36023 9906	1	1125	480	454	0	0	0
16	Cortland	36023 9906	2	625	331	362	0	0	0
17	Cortland	36023 9906	3	805	444	462	0	0	0
18	Cortland	36023 9906	4	656	331	308	0	0	0
19	Cortland	36023 9907	1	991	439	450	0	0	0
20	Cortland	36023 9907	2	1149	456	422	0	0	0
21	Cortland	36023 9907	3	873	382	383	0	0	0
22	Cortland	36023 9907	4	1001	379	393	0	0	0
23	Cortland	36023 9907	5	994	361	369	0	0	0
24	Cortland	36023 9908	1	2786	91	85	0	0	0
25	Cortland	36023 9909	1	1506	524	530	0	0	0
26	Cortland	36023 9909	2	1117	480	500	0	0	0
27	Cortland	36023 9909	3	1225	542	547	0	0	0
28	Cortland	36023 9909	4	905	350	325	0	0	0
29	Cortlandville	36023 9910	1	717	288	13	15	255	6
30	Cortlandville	36023 9910	2	870	314	106	4	162	8
31	Cortlandville	36023 9910	3	1363	604	623	0	0	4
32	Cortlandville	36023 9910	4	1045	442	405	6	49	0
33	Cortlandville	36023 9910	5	929	326	83	0	256	0
34	Virgil	36023 9912	1	803	314	17	12	259	33
35	Virgil	36023 9912	2	909	451	103	31	307	16
36	Virgil	36023 9912	3	1073	360	12	19	308	15
	Totals:			37143	13992	10544	197	3105	153

Brockway Motor Trucks
Cortland, NY

City	Census Tract ID		Tract People	House Count	Public Water	Drilled Wells	Dug Wells	Other Wells
Cortland	36023 9907	1	991	439	450	0	0	0
Cortland	36023 9907	2	1149	456	422	0	0	0
Cortland	36023 9907	3	873	382	383	0	0	0
Cortland	36023 9907	4	1001	379	393	0	0	0
Cortland	36023 9907	5	994	361	369	0	0	0
Cortland	36023 9908	1	2786	91	85	0	0	0
Cortland	36023 9909	1	1506	524	530	0	0	0
Cortland	36023 9909	2	1117	480	500	0	0	0
Cortland	36023 9909	3	1225	542	547	0	0	0
Cortland	36023 9905	1	587	187	186	0	0	0
Cortland	36023 9905	2	891	401	379	0	5	0
Cortland	36023 9905	3	992	433	427	5	0	0
Cortland	36023 9905	4	796	335	344	0	0	0
Cortland	36023 9905	5	777	333	343	0	0	0
Cortland	36023 9906	1	1125	480	454	0	0	0
Cortland	36023 9906	2	625	331	362	0	0	0
Cortland	36023 9906	3	805	444	462	0	0	0
Cortland	36023 9906	4	656	331	308	0	0	0
Cortland	36023 9909	4	905	350	325	0	0	0
	Sub Totals:		19801	7279	7269	5	5	0
Cortlandville	36023 9910	1	717	288	13	15	255	6
Cortlandville	36023 9910	2	870	314	106	4	162	8
Cortlandville	36023 9910	3	1363	604	623	0	0	4
Cortlandville	36023 9910	4	1045	442	405	6	49	0
Cortlandville	36023 9910	5	929	326	83	0	256	0
Cortlandville	36023 9904	1	1035	391	166	5	192	18
Cortlandville	36023 9904	2	1357	497	309	15	172	0
Cortlandville	36023 9904	3	738	262	41	19	175	20
	Sub Totals:		8054	3124	1746	64	1261	56
Homer	36023 9902	4	1525	560	71	26	430	20
Homer	36023 9902	5	1953	712	152	40	528	13
Homer	36023 9903	1	920	366	370	0	7	0
Homer	36023 9903	2	473	189	194	0	0	0
Homer	36023 9903	3	895	355	338	0	0	0
Homer	36023 9903	4	737	282	272	0	0	0
	Sub Totals:		6503	2464	1397	66	965	33
Virgil	36023 9912	1	803	314	17	12	259	33
Virgil	36023 9912	2	909	451	103	31	307	16
Virgil	36023 9912	3	1073	360	12	19	308	15
	Sub Totals:		2785	1125	132	62	874	64

Brockway Motor Trucks
Cortland, NY

For Radius of 4 Mi., Circle Area = 50.265482

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Homer	36023 99024	24.085127	5.079341	21.09
2	Homer	36023 99025	24.126480	3.913156	16.22
3	Homer	36023 99031	0.433740	0.433740	100.00
4	Homer	36023 99032	0.148730	0.148730	100.00
5	Homer	36023 99033	0.290044	0.290044	100.00
6	Homer	36023 99034	0.218577	0.218577	100.00
7	Cortlandville	36023 99041	11.430157	8.380529	73.32
8	Cortlandville	36023 99042	9.426162	2.821768	29.94
9	Cortlandville	36023 99043	8.321744	8.278648	99.48
10	Cortland	36023 99051	0.235952	0.235952	100.00
11	Cortland	36023 99052	0.403505	0.403505	100.00
12	Cortland	36023 99053	0.152724	0.152724	100.00
13	Cortland	36023 99054	0.070217	0.070217	100.00
14	Cortland	36023 99055	0.266340	0.266340	100.00
15	Virgil	36023 99123	16.095308	0.705509	4.38
16	Cortland	36023 99062	0.066603	0.066603	100.00
17	Cortland	36023 99063	0.110335	0.110335	100.00
18	Cortland	36023 99064	0.172827	0.172827	100.00
19	Cortland	36023 99071	0.165488	0.165488	100.00
20	Cortland	36023 99072	0.249226	0.249226	100.00
21	Cortland	36023 99073	0.179183	0.179183	100.00
22	Cortland	36023 99074	0.092570	0.092570	100.00
23	Cortland	36023 99075	0.092674	0.092674	100.00
24	Cortland	36023 99081	0.251524	0.251524	100.00
25	Cortland	36023 99091	0.457647	0.457647	100.00
26	Cortland	36023 99092	0.294394	0.294394	100.00
27	Cortland	36023 99093	0.190750	0.190750	100.00
28	Cortland	36023 99094	0.186391	0.186391	100.00
29	Cortlandville	36023 99101	6.834331	4.833676	70.73
30	Cortlandville	36023 99102	3.668372	3.668372	100.00
31	Cortlandville	36023 99103	0.489055	0.489055	100.00
32	Cortlandville	36023 99104	1.695762	1.695762	100.00
33	Cortlandville	36023 99105	6.511772	3.470623	53.30
34	Virgil	36023 99121	24.300865	0.019290	0.08
35	Virgil	36023 99122	29.580618	2.022264	6.84
36	Cortland	36023 99061	0.158049	0.158049	100.00
	Totals:		171.453262	50.265488	

For Radius of 3 Mi., Circle Area = 28.274334

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Homer	36023 99024	24.085127	1.677696	6.97
2	Homer	36023 99025	24.126480	0.837967	3.47
3	Homer	36023 99031	0.433740	0.113668	26.21
4	Homer	36023 99032	0.148730	0.132569	89.13
5	Homer	36023 99033	0.290044	0.290044	100.00
6	Homer	36023 99034	0.218577	0.218577	100.00

Brockway Motor Trucks
Cortland, NY

7	Cortlandville	36023 99041	11.430157	5.695389	49.83
8	Cortlandville	36023 99042	9.426162	0.696515	7.39
9	Cortlandville	36023 99043	8.321744	6.636548	79.75
10	Cortland	36023 99051	0.235952	0.235952	100.00
11	Cortland	36023 99052	0.403505	0.403505	100.00
12	Cortland	36023 99053	0.152724	0.152724	100.00
13	Cortland	36023 99054	0.070217	0.070217	100.00
14	Cortland	36023 99055	0.266340	0.266340	100.00
16	Cortland	36023 99062	0.066603	0.066603	100.00
17	Cortland	36023 99063	0.110335	0.110335	100.00
18	Cortland	36023 99064	0.172827	0.172827	100.00
19	Cortland	36023 99071	0.165488	0.165488	100.00
20	Cortland	36023 99072	0.249226	0.249226	100.00
21	Cortland	36023 99073	0.179183	0.179183	100.00
22	Cortland	36023 99074	0.092570	0.092570	100.00
23	Cortland	36023 99075	0.092674	0.092674	100.00
24	Cortland	36023 99081	0.251524	0.251524	100.00
25	Cortland	36023 99091	0.457647	0.457647	100.00
26	Cortland	36023 99092	0.294394	0.294394	100.00
27	Cortland	36023 99093	0.190750	0.190750	100.00
28	Cortland	36023 99094	0.186391	0.186391	100.00
29	Cortlandville	36023 99101	6.834331	2.874069	42.05
30	Cortlandville	36023 99102	3.668372	3.207101	87.43
31	Cortlandville	36023 99103	0.489055	0.458250	93.70
32	Cortlandville	36023 99104	1.695762	1.532698	90.38
33	Cortlandville	36023 99105	6.511772	0.426833	6.55
36	Cortland	36023 99061	0.158049	0.158049	100.00
	Totals:		101.476471	28.594322	

r Radius of 2 Mi., Circle Area = 12.566371

o.	City	Block Group ID	Total Area	Partial Area	% Within Radius
1	Homer	36023 99024	24.085127	0.005907	0.02
5	Homer	36023 99033	0.290044	0.013017	4.49
7	Cortlandville	36023 99041	11.430157	2.738210	23.96
8	Cortlandville	36023 99042	9.426162	0.019694	0.21
9	Cortlandville	36023 99043	8.321744	2.908881	34.96
10	Cortland	36023 99051	0.235952	0.235952	100.00
11	Cortland	36023 99052	0.403505	0.403505	100.00
12	Cortland	36023 99053	0.152724	0.152724	100.00
13	Cortland	36023 99054	0.070217	0.070217	100.00
14	Cortland	36023 99055	0.266340	0.266340	100.00
16	Cortland	36023 99062	0.066603	0.066603	100.00
17	Cortland	36023 99063	0.110335	0.110335	100.00
18	Cortland	36023 99064	0.172827	0.172827	100.00
19	Cortland	36023 99071	0.165488	0.165488	100.00
20	Cortland	36023 99072	0.249226	0.249226	100.00
21	Cortland	36023 99073	0.179183	0.179183	100.00
22	Cortland	36023 99074	0.092570	0.092570	100.00
23	Cortland	36023 99075	0.092674	0.092674	100.00
24	Cortland	36023 99081	0.251524	0.251524	100.00
25	Cortland	36023 99091	0.457647	0.457647	100.00
26	Cortland	36023 99092	0.294394	0.294394	100.00
27	Cortland	36023 99093	0.190750	0.190750	100.00
28	Cortland	36023 99094	0.186391	0.186391	100.00

Brockway Motor Trucks
Cortland, NY

29	Cortlandville	36023 99101	6.834331	1.495840	21.89
30	Cortlandville	36023 99102	3.668372	1.037271	28.28
31	Cortlandville	36023 99103	0.489055	0.081344	16.63
32	Cortlandville	36023 99104	1.695762	0.469807	27.70
36	Cortland	36023 99061	0.158049	0.158049	100.00
Totals:			70.037155	12.566370	

For Radius of 1 Mi., Circle Area = 3.141593

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
7	Cortlandville	36023 99041	11.430157	0.204648	1.79
9	Cortlandville	36023 99043	8.321744	0.167458	2.01
10	Cortland	36023 99051	0.235952	0.154941	65.67
11	Cortland	36023 99052	0.403505	0.399969	99.12
12	Cortland	36023 99053	0.152724	0.131430	86.06
13	Cortland	36023 99054	0.070217	0.070217	100.00
14	Cortland	36023 99055	0.266340	0.266340	100.00
16	Cortland	36023 99062	0.066603	0.066603	100.00
17	Cortland	36023 99063	0.110335	0.110335	100.00
18	Cortland	36023 99064	0.172827	0.172827	100.00
19	Cortland	36023 99071	0.165488	0.022736	13.74
20	Cortland	36023 99072	0.249226	0.050476	20.25
21	Cortland	36023 99073	0.179183	0.004304	2.40
22	Cortland	36023 99074	0.092570	0.073630	79.54
23	Cortland	36023 99075	0.092674	0.092674	100.00
24	Cortland	36023 99081	0.251524	0.075068	29.85
25	Cortland	36023 99091	0.457647	0.441495	96.47
26	Cortland	36023 99092	0.294394	0.275101	93.45
27	Cortland	36023 99093	0.190750	0.163695	85.82
28	Cortland	36023 99094	0.186391	0.006763	3.63
29	Cortlandville	36023 99101	6.834331	0.033204	0.49
36	Cortland	36023 99061	0.158049	0.158049	100.00
Totals:			30.382631	3.141961	

For Radius of .5 Mi., Circle Area = 0.785398

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
11	Cortland	36023 99052	0.403505	0.075133	18.62
12	Cortland	36023 99053	0.152724	0.001895	1.24
13	Cortland	36023 99054	0.070217	0.007457	10.62
14	Cortland	36023 99055	0.266340	0.104704	39.31
16	Cortland	36023 99062	0.066603	0.061212	91.91
17	Cortland	36023 99063	0.110335	0.110335	100.00
18	Cortland	36023 99064	0.172827	0.148191	85.75
23	Cortland	36023 99075	0.092674	0.020007	21.59
25	Cortland	36023 99091	0.457647	0.074061	16.18
26	Cortland	36023 99092	0.294394	0.001269	0.43
27	Cortland	36023 99093	0.190750	0.026207	13.74
36	Cortland	36023 99061	0.158049	0.154927	98.02

Brockway Motor Trucks
Cortland, NY

Totals:	2.436064	0.785398

For Radius of .25 Mi., Circle Area = 0.196350

No.	City	Block Group ID	Total Area	Partial Area	% Within Radius
16	Cortland	36023 99062	0.066603	0.004941	7.42
17	Cortland	36023 99063	0.110335	0.061388	55.64
18	Cortland	36023 99064	0.172827	0.022222	12.86
25	Cortland	36023 99091	0.457647	0.006630	1.45
36	Cortland	36023 99061	0.158049	0.101168	64.01
	Totals:		0.965461	0.196350	

========== Site Data ==========

Population:	29753.69
Households:	11184.99
Drilled Wells:	67.60
Dug Wells:	1117.17
Other Water Sources:	57.44

$\frac{29754}{11185} = 2.66$ population density

========== Partial (RING) data ==========

---- Within Ring: 4 Mile(s) and 3 Mile(s) ----

Population:	2934.70
Households:	1117.92
Drilled Wells:	25.42
Dug Wells:	504.17
Other Wells:	17.41

** Population On Private Wells: 1390.23

---- Within Ring: 3 Mile(s) and 2 Mile(s) ----

Population:	5549.54
Households:	2210.96
Drilled Wells:	23.23
Dug Wells:	385.17
Other Wells:	24.48

** Population On Private Wells: 1025.09

---- Within Ring: 2 Mile(s) and 1 Mile(s) ----

Population:	7734.00
Households:	2412.18
Drilled Wells:	14.11
Dug Wells:	214.67
Other Wells:	14.79

** Population On Private Wells: 733.51

---- Within Ring: 1 Mile(s) and .5 Mile(s) ----

Population:	9291.14
Households:	3455.58
Drilled Wells:	4.79
Dug Wells:	12.22
Other Wells:	0.75

** Population On Private Wells: 45.73

Brockway Motor Trucks
Cortland, NY

---- Within Ring: .5 Mile(s) and .25 Mile(s) ----

Population:	2923.77
Households:	1359.35
Drilled Wells:	0.06
Dug Wells:	0.93
Other Wells:	0.00

** Population On Private Wells: 2.14

---- Within Ring: .25 Mile(s) and 0 Mile(s) ----

Population:	1320.54
Households:	628.99
Drilled Wells:	0.00
Dug Wells:	0.00
Other Wells:	0.00

** Population On Private Wells: 0.00

** Total Population On Private Wells: 3196.70

Reference 6

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wildlife Resources Center
700 Troy-Schenectady Road
Latham, NY 12110-2400 (518) 783-3932

Langdon Marsh
Commissioner

January 26, 1995

Jeff Martin
Ebasco Environmental
2111 Wilson Blvd., Suite 435
Arlington, VA 22201-3058

Dear Mr. Martin:

We have reviewed the New York Natural Heritage Program files with respect to your recent request for biological information concerning the USEPA Hazardous Waste Investigation, Site: Brockway Motor Trucks, located in the Town of Cortland, Cortland County, New York State.

Enclosed is a computer printout covering the area you requested to be reviewed by our staff. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional office, Division of Regulatory Affairs, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

If this proposed project is still active one year from now we recommend that you contact us again so that we can update this response.

Sincerely,
Information Services
New York Natural Heritage Program

Encs.
cc: Reg. 7, Wildlife Mgr.
Reg. 7, Fisheries Mgr.

BROCKWAY MOTOR TRUCKS

BIOLOGICAL AND CONSERVATION DATA SYSTEM - ELEMENT OCCURRENCE REPORT, 20 JAN 1995
Prepared by N.Y.S.D.E.C NATURAL HERITAGE PROGRAM

(This report contains sensitive information which should be treated in a sensitive manner. Refer to the users guide for explanation of codes and ranks.)

COUNTY & TOWN	USGS 7 1/2' TOPOGRAPHIC MAP	LAT./ LONG.	PREC- ISION	LAST SEEN	EO RANK	SCIENTIFIC NAME	COMMON NAME	ELEMENT TYPE	NY STATUS	FED. STATUS	GLOBAL RANK	STATE RANK	OFFICE	USE
CORTLAND														
CORTLANDVILLE	CORTLAND	423416 761345	S	1993	C	MARL POND SHORE	MARL POND SHORE	COMMUNITY	U		G3G4	S1	4207652	1
CORTLANDVILLE	CORTLAND	423414 761352	S	1993	B	MARL POND SHORE	MARL POND SHORE	COMMUNITY	U		G3G4	S1	4207652	2
CORTLANDVILLE	CORTLAND	423409 761355	S	1993	AB	MARL POND SHORE	MARL POND SHORE	COMMUNITY	U		G3G4	S1	4207652	3
CORTLANDVILLE	CORTLAND	423416 761345	S	1980	D	ARMORACIA LACUSTRIS	LAKE-CRESS	VASCULAR PLANT	R	3C	G4?	S2S3	4207652	1

Records Processed

USERS GUIDE TO NATURAL HERITAGE DATA

DATA SENSITIVITY: The data provided in these reports is sensitive and should be treated in a sensitive manner. The data is for your in-house use only and may not be released to the general public or incorporated in any public document without prior permission from the Natural Heritage Program.

BIOLOGICAL AND CONSERVATION DATA SYSTEM ELEMENT OCCURRENCE REPORTS:

COUNTY NAME: County where the element occurrence is located.
TOWN NAME: Town where the element occurrence is located.
USGS 7 1/2' TOPOGRAPHIC MAP: Name of 7.5 minute US Geological Survey (USGS) quadrangle map (scale 1:24,000).
LAT: Centrum latitude coordinates of the location of the occurrence. Important: latitude and longitude must be used with PRECISION (see below). For example, the location of an occurrence with M (minute) precision is not precisely known at this time and is thought to occur somewhere within a 1.5 mile radius of the given latitude/longitude coordinates.
LONG: Centrum longitude coordinates of the location of the occurrence. See also LAT above.
PRECISION: S - seconds: Location known precisely. (within a 300' or 1-second radius of the latitude and longitude given.
M - minutes: Location known only to within a 1.5 mile (1 minute) radius of the latitude and longitude given.
SIZE (acres): Approximate acres occupied by the element at this location.
SCIENTIFIC NAME: Scientific name of the element occurrence.
COMMON NAME: Common name of the element occurrence.
ELEMENT TYPE: Type of element (i.e. plant, community, other, etc.)
LAST SEEN: Year element occurrence last observed extant at this location.
EO RANK: Comparative evaluation summarizing the quality, condition, viability and defensibility of this occurrence. Use in combination with LAST SEEN and PRECISION.
A-E = Extant: A=excellent, B=good, C=marginal, D=poor, E=extant but with insufficiently data to assign a rank of A - D.
F = Failed to find. Did not locate species, but habitat is still there and further field work is justified.
H = Historic. Historic occurrence without any recent field information.
X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.

NYS STATUS - animals: Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.
E = Endangered Species: any species which meet one of the following criteria:
1) Any native species in imminent danger of extirpation or extinction in New York.
2) Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.
T = Threatened Species: any species which meet one of the following criteria:
1) Any native species likely to become an endangered species within the foreseeable future in NY.
2) Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.
SC = Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York. Unlike the first two categories, species of special concern receive no additional legal protection under Environmental Conservation Law section 11-0535 (Endangered and Threatened Species).
P = Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.
U = Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.
G = Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NYS STATUS - plants: The following categories are defined in regulation 6NYCRR part 193.3 and apply to New York State Environmental Conservation Law section 9-1503.
(blank) = no state status
E = Endangered Species: listed species are those with:
1) 5 or fewer extant sites, or
2) fewer than 1,000 individuals, or
3) restricted to fewer than 4 U.S.G.S. 7 1/2 minute topographical maps, or
4) species listed as endangered by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.
T = Threatened: listed species are those with:
1) 6 to fewer than 20 extant sites, or
2) 1,000 to fewer than 3,000 individuals, or
3) restricted to not less than 4 or more than 7 U.S.G.S. 7 and 1/2 minute topographical maps, or
4) listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.
R = Rare: listed species have:
1) 20 to 35 extant sites, or
2) 3,000 to 5,000 individuals statewide.
U = Unprotected
V = Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.

NYS STATUS - communities: At this time there are no categories defined for communities.

continued on next page

FEDERAL STATUS (plants and animals): The categories of federal status are defined by the United States Department of the Interior as part of the 1974 Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 50, no. 188, pp. 39526 - 39527.

(blank) = No Federal Endangered Species Act status.
LE = The taxon is formally listed as endangered.
LT = The taxon is formally listed as threatened.
LELT = The taxon is formally listed as endangered in part of its range and threatened in other parts.
PE = The taxon is proposed as endangered.
PT = The taxon is proposed as threatened.
C1 = Candidate, category 1 - There is sufficient information to list the taxon as endangered or threatened.
C2 = Candidate, category 2 - The taxon may be appropriate for listing but more data are needed.
3A = The taxon considered extinct by the U. S. Fish and Wildlife Service.
3B = The taxon is no longer considered taxonomically distinct by the U.S. Fish and Wildlife Service & thus not appropriate for listing.
3C = The taxon has been shown to be more abundant, widespread, or better protected than previously thought and therefore not in need of official listing.
* = The taxon is possibly extinct.
** = The taxon is thought to be extinct in the wild but extant in cultivation.

Additional codes:
(C2NL) = Heritage code indicating that the taxon is a candidate in some areas, not listed in other areas.
(E/SA) = Heritage code indicating that the taxon is endangered because of similarity of appearance to other endangered species or subspecies.

FEDERAL STATUS (communities): At this time there are no categories defined for communities.

GLOBAL AND STATE RANKS (animals, plants, communities and others): Each element has a global and state rank as determined by the NY Natural Heritage Program. These ranks carry no legal weight. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. Infraspecific taxa are also assigned a taxon rank to reflect the infraspecific taxon's rank throughout the world.

GLOBAL RANK:
G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology.
G2 = Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.
G3 = Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.
G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
GH = Historically known, with the expectation that it might be rediscovered.
GX = Species believed to be extinct.
GU = Status unknown.

STATE RANK:
S1 = Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.
S2 = Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.
S3 = Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.
S4 = Apparently secure in New York State.
S5 = Demonstrably secure in New York State.
SH = Historically known from New York State, but not seen in the past 15 years.
SX = Apparently extirpated from New York State.
SA = Accidental or casual in the state.
SE = Exotic, not native to New York State.
SP = Element potentially occurs in the state but there are no occurrences reported.
SR = Reported in the state but without persuasive documentation.
SU = Status unknown.

TAXON (T) RANK: The T-ranks (T1 - T5) are defined the same way the Global ranks (G1 - G5) are but the T-rank only refers to the rarity of the subspecific taxon of the species as a whole.
T1 through T5 = See Global Rank definitions above.
Q = Indicates a question exists whether or not the taxon is a good taxonomic entity.
? = Indicates a question exists about the rank.

OFFICE USE: Information for use by the Natural Heritage Program.

SIGNIFICANT HABITAT REPORTS:

REPORT ID: Significant habitat file code.
NAME OF AREA: Site name where the significant habitat is located.
TYPE OF AREA: Type of significant habitat.
COUNTY/TOWN OR CITY: County and town where the significant habitat is located.
QUADRANGLE: Name of the USGS 7.5 minute topographic map where the significant habitat is located.
LATITUDE: Latitude coordinates (degrees, minutes, seconds) for the location of the significant habitat.
LONGITUDE: Longitude coordinates for the location of the significant habitat.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

REGULATORY AFFAIRS REGIONAL OFFICES

REGION	COUNTIES	NAME	ADDRESS AND PHONE NO.
Region 1	Nassau Suffolk	Robert Greene Permit Administrator	Loop Road, Bldg. 40 SUNY Stony Brook, NY 11790-2356 (516) 751-1389
Region 2	New York City	John Ferguson Permit Administrator	Hunters Point Plaza 4740 21st Street Long Island City, NY 11101-5407 (718) 482-4997
Region 3	Dutchess Orange Putnam Rockland, Sullivan Ulster, Westchester	Margaret Duke Permit Administrator	21 South Putt Corners Road New Paltz, NY 12561-1696 (914) 256-3032
Region 4	Albany Columbia Delaware Greene, Montgomery, Otsego Rensselaer, Schenectady, Schoharie	William J. Clarke Permit Administrator	2176 Guilderland Avenue Schenectady, NY 12306-4498 (518) 382-0680
Region 5	Clinton Essex Franklin Fulton, Hamilton Saratoga, Warren, Washington	Richard Wild Permit Administrator	Route 86 Ray Brook, NY 12977 (518) 891-1370
Region 6	Herkimer Jefferson Lewis Oneida, St. Lawrence	Randy Vaas Permit Administrator	State Office Building 317 Washington Street Watertown, NY 13601 (315) 785-2246
Region 7	Broome Cayuga Chenango Cortland, Madison, Onondaga Oswego, Tioga, Tompkins	Robert Torba Permit Administrator	615 Erie Blvd. West Syracuse, NY 13204-2400 (315) 426-7439
Region 8	Chemung Genesee Livingston Monroe, Ontario, Orleans Schuyler, Seneca, Steuben Wayne, Yates	Albert Butkas Permit Administrator	6274 East Avon-Lima Road Avon, NY 14414 (716) 226-2466
Region 9	Allegany Cattaraugus Chautauqua Erie, Niagara, Wyoming	Steven Doleski Permit Administrator	270 Michigan Avenue Buffalo, NY 14203-2999 (716) 851-7165

Reference 7

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

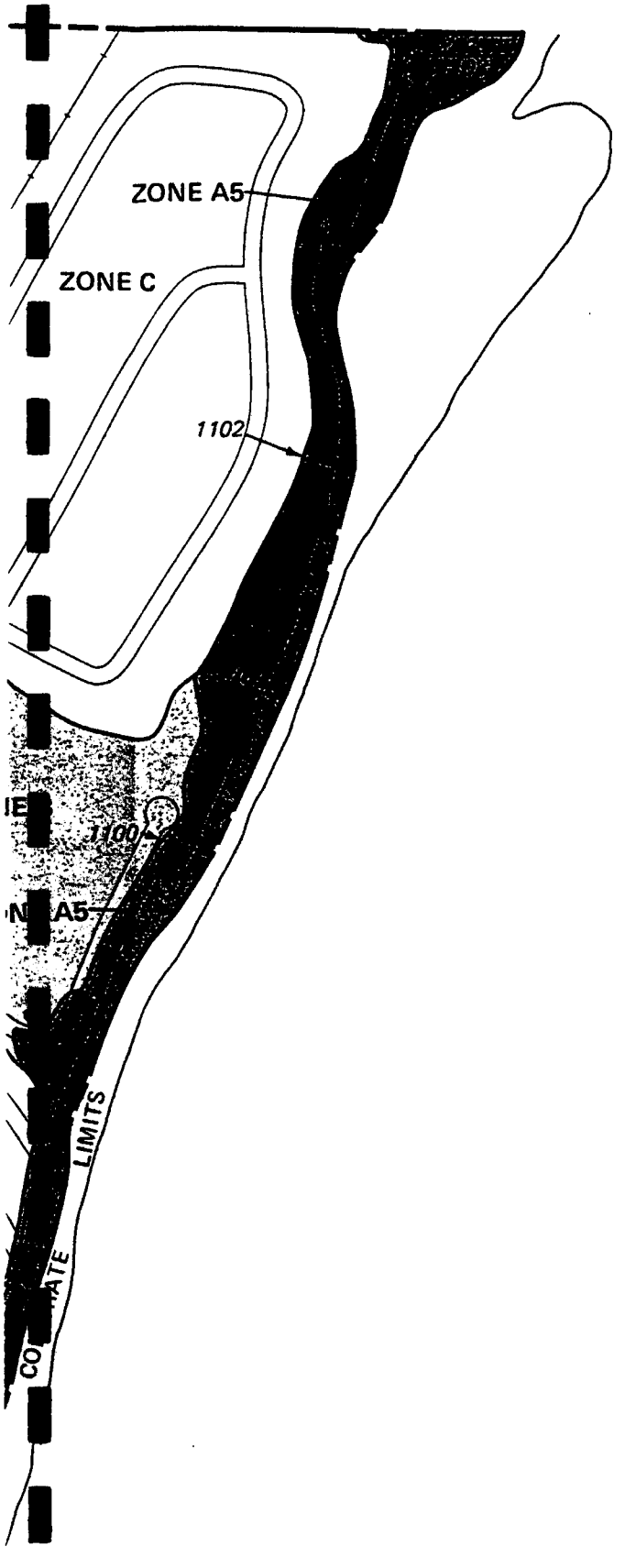
CITY OF
CORTLAND,
NEW YORK
CORTLAND COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
360178 0001 C

EFFECTIVE DATE:
AUGUST 15, 1983

FEDERAL EMERGENCY MANAGEMENT AGENCY



KEY TO MAP

500-Year Flood Boundary	
100-Year Flood Boundary	
Zone Designations*	ZONE B / ZONE B
100-Year Flood Boundary	
500-Year Flood Boundary	
Base Flood Elevation Line With Elevation In Feet**	513
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)
Elevation Reference Mark	RM7×
Zone D Boundary	
River Mile	•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

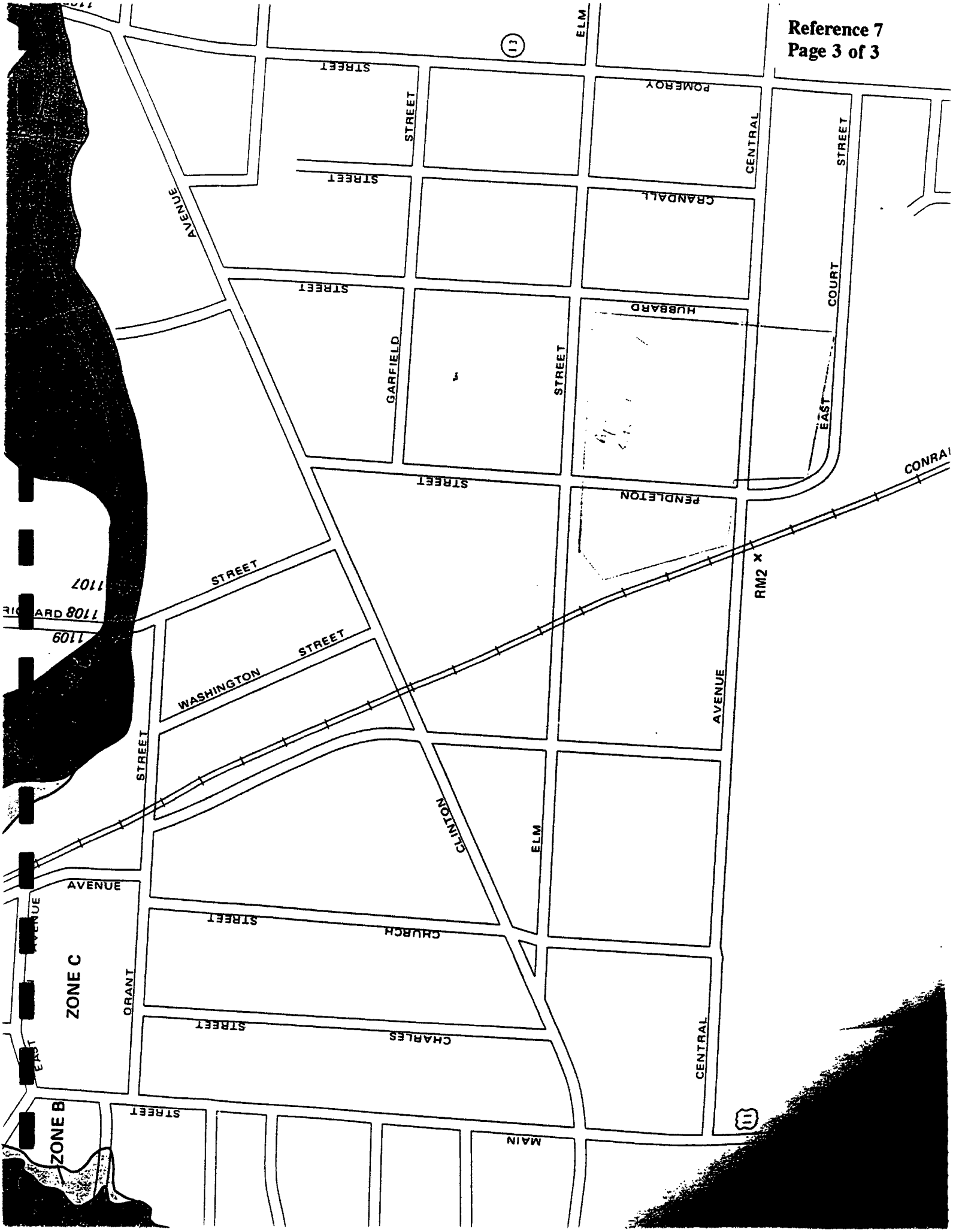
NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

INITIAL IDENTIFICATION:
MARCH 29, 1974

FLOOD HAZARD BOUNDARY MAP REVISIONS:
FEBRUARY 21, 1975


ELM
STREET
POMEROY
CENTRAL
STREET
STREET
GRANDALL
AVENUE
STREET
HUBBARD
COURT
GARFIELD
STREET
EAST
STREET
PENDLETON
CONRA
RM2 ×
STREET
1107
1108
1109
WASHINGTON
STREET
AVENUE
STREET
CLINTON
ELM
AVENUE
STREET
CHURCH
ZONE C
GRANT
STREET
CHARLES
CENTRAL
ZONE B
STREET
MAIN

Reference 8

Brockway Motors

EPH Contract #

08-WR-010

WAR. 015-2052

DIETZGEN

ENGINEERS

FIELD BOOK

NO. 340BN

BOOK #11

START 3/24/15

END

Rubbermaid

Home Products Division
Rubbermaid Incorporated

Rubbermaid Home Products

1147 Akron Road
Wooster, OH 44691-6000
216/264-6464 ext. 2680
Fax 216/287-2922

John A. Grimmer
Environmental Engineer

Distance out from Side or Shoulder Stake											
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
40	60.0	60.2	60.3	60.5	60.6						40

Rubbermaid

RUBBERMAID — CORTLAND INC.

BILL McGOVERN
Technical Services Manager

106 Central Ave.
Cortland, NY 13045-2755
(607) 753-3305

Rubbermaid

Rubbermaid Incorporated

Home Products Division
1147 Akron Rd.
Wooster, OH 44691-6000
216/264-6464 Ext. 2520
Fax: 216/287-2898

Dave Sudzina
Plastics Operations Manager

Property of EBASCO

~~2711~~ 2111 Wilson Blvd (Suite 435)

Address Arlington, VA 2

Phone (703) 358-8900

Rubbermaid

RUBBERMAID — CORTLAND INC.

WILLIAM G. LEWIS
Plant Facilities Engineer

106 Central Ave.
Cortland, NY 13045-2755
(607) 753-3305
Ext. 210
Fax: (607) 753-3752

INDEX PAGE

JOB NO.	PROJECT	PAGE NUMBER

(1)

3/21/95
Rainy, overcast, in 50's
0838 Arrive on site
Ebasco team - Jeff Martin Mahon Kumar (MK)
0903 Meeting w/ below of Rubermaid.
Bill McGovern Tech Serv Man
Bill Lewis Fact Eng.
Dave ~~[illegible]~~ (JM) Sutland.
Jack Grimmer
Bruce Stroke - HS Mgr.

Topics
General discussion on Todays Activity

Headed Back to cover: RM.
Just J. Grimmer, MK + Martin
Invest. for NUS was for
111-TCA, not TCE. per Discussion.

Bill - Canford - Brought - 84
operating as Canford sub of Rubbermaid.

3/21/95

(2)

Jack indicated
Brockway - operating 1913
↓
1978.

inside Cortland.

Jack Grimmer
- NUS on site ~ 2 wks after spill of TCA. Their Invess. goes towards TCA.

Jack Grimmer
Current Policy.
(1) Fill out spill Paper
(2) Notify Proper State Offic
(3) Call Hazard. Emerg. Hotline

Jack indicates -
Brockway owned Beer Dist. and Canford.

3/21/95 Jeff Tier

(3)

Jack G.
- Talked w/ one gentlemen who worked with Brockway he had no info. to offer.

- Dry wells for Drainage of Parking lot. Drainage flow south in center of parking (Salary) lot to Dry wells

- 9/23/86 found tank in in Parking lot. DEC ask for Installing Wells 1 up 2 down gradient. They did. (We have Results)

'87 NUS came and ~~tot~~ Jim took samples from Wells.

'94 Rubbermaid Drilled wells
10/26/94 out and grouted them.

3/21/95 Jeff Tier

(4)

Use of Chemicals (Hazardous substances)
Using Hydraulic oil.
X Kleen (high grade Safety Kleen)

J. Grimmer.
No Toxic metals (Lead, Chromium, Cadmium)
Not used on this site.

J. Grimmer
Waste - Hydraulic, Waste Oil
some Paint, some WD40
Safety Kleen. (X-Kleen
2-55 Gallon drums it.

- Waste usually disposed of as small quantity. Waste generator.
- NO RCRA waster Permit

- Stored in flamable lockers
Dikes up to 110% of quantity
(Hydrolyc oil)

- Chemicals onsite (other)
  - water treatment chemical Betsintex
  - pigment (some)

3/21/95 Jeff Martz

(5)

- Workers on site? talk to Bill. ~"400 associates"
Brockway up to 76
- Vacant 76 - 79 right after Brockway
79 - present Cantford & Rubbermaid

J. Grimmer Pulled info from his inventory.
Materials - Propane Tanks (Fork Lifts)
Paints
X Kleen
Lift Batteries
Betz Cintex (Water Treatment)
Compress Gas (Welding Gase)
Fungicide? Bactericide

Raw Mat.
Poly propylene + poly ethylene

Waste Stream
Oils used (Oil dry)
Purged Plastic
Misc office Material.

- Safety Kleen is Contractor to handle Waste.

3/21/95 Jeff Martz

(6)

- Roof Drainage to Storm sewer down Central to River
- Parking lots to Dry wells
- 3/12/95 Transfer of ownership of Canford from Stanly.
- Rubbermaid on City Water.

Bill L. - Box Culvert runs along grassy area East toward river

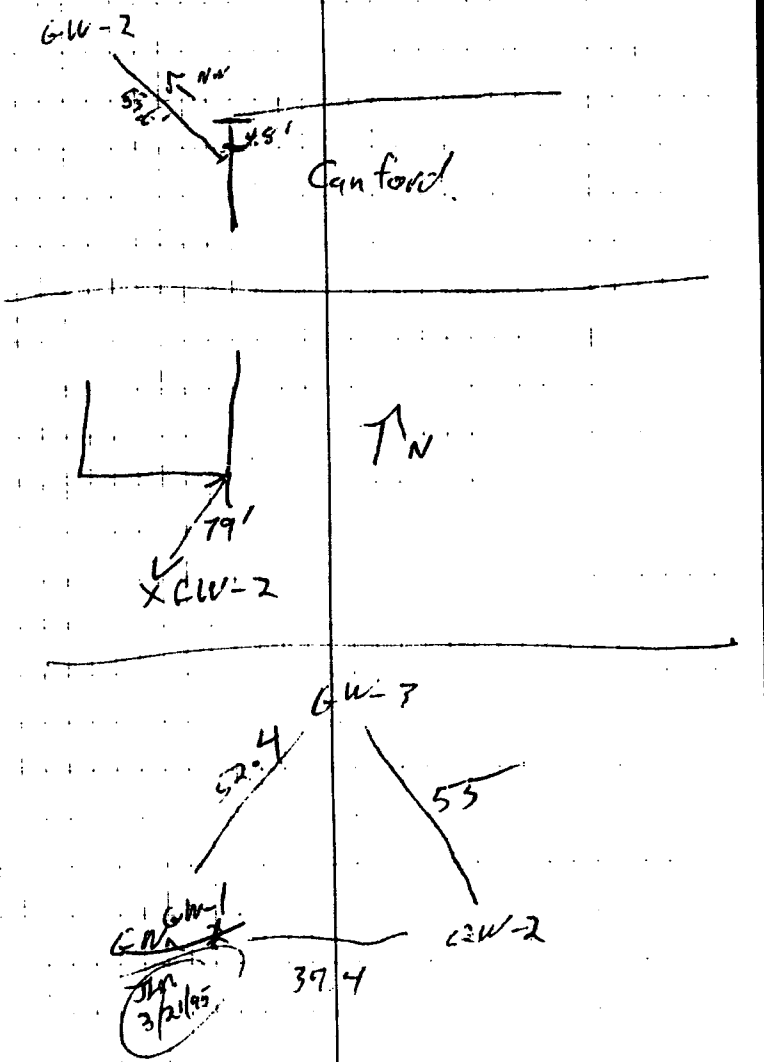
Head outside for quick walk.

+ towers of resin. Towers on East of Pendleton Old. Just west of Canford section.

3/21/95

(7)

Distance to MW.



3/21/95

(8)

1145 MK taking video from corner of Canford Pan.

1150 - 1127 Picture of me (Jeff) on GW2 - NW direction N-30°W

#26 Picture me (Jeff) standing on GW-1 location

#25 Picture of me (Jeff) standing on GW-2 location N-45°

- Dry well NW to corner of property 47' from fence near Beer Distrib.

57' to corner of Warehouse #2

3/21/95

(9)

- Corner of Warehouse Beer Distrib. open fence area.

- #24 pic - Southern side of Beer Distrib. in NW direction

- Pic #23 - Northern side of Beer Distrib. in NW direction

- Pic #22 - Dry located near Beer Distrib.

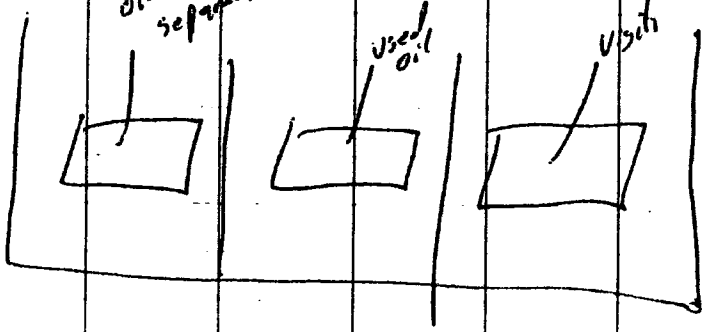
To first Dry well in Employee Parking lot Distance to Canford in Southerly Direction - 70.6'

Distance to Single Door. (Easterly) - 98'

a total of 3 Dry wells 42' ft between each well. East to West. Employee Parking lot.

3/21/95

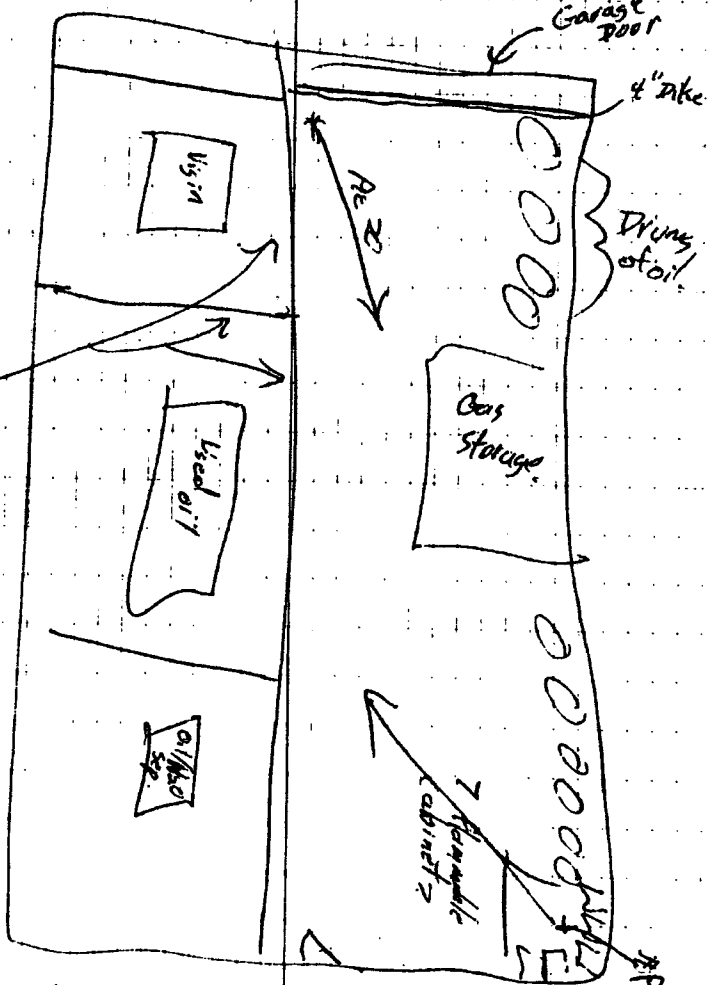
(10)



Dikes are 5 ft around all Tanks. There is 4" High Berm for protection of run off from garage door

3/21/99

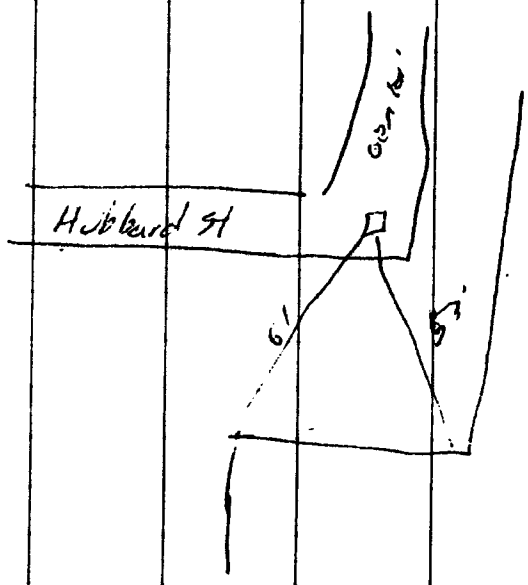
(11)



3/21/99

(12)

- Transformer are 1200 gallons are PCB Freon and gravel patch underneath Transformer East side Canford Bldg. Hubbard St.
- 53' to corner of Bldg (inner) to storm Drain. 61' to other corner



3/21/95

(13)

1220 PC #19 East ward down Central Ave Toward River. Storm sewer runs straigt to river.

- MK Taking video of Hubbard St and central Ave.

- Appoximately 100ft on East side of Parking lot on was Part of the Brockway other side East Cart St.

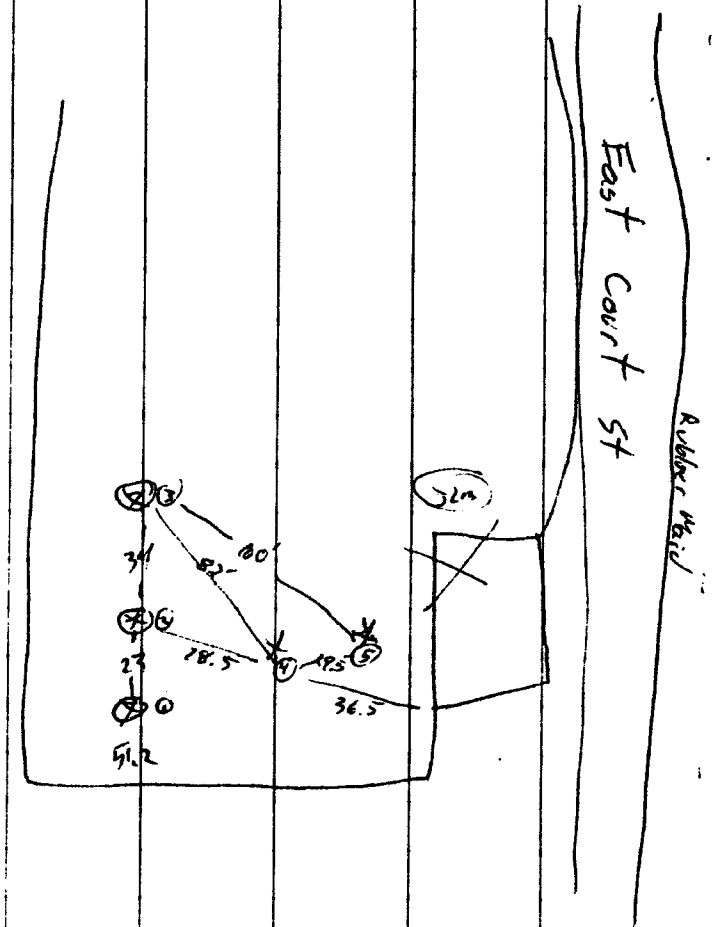
The ~~Two~~ ~~three~~ five Dry wells in the Parking lots are located in the SE corner of the Lt.

51.2' to 1st Dry well
23' 1st Well to 2nd
47' from Corner (inner) to 2nd well
74.5 from 2nd to 4th
82' from 4th to 3rd
100' from 3rd to 5th

3/21/95

(14)

Dry well locates
on Trailer lot



(15)

36.5 from 4th to corner
24.5 from 4th to 5th

1210 MK on 4th Dry Well Pic 18
E.E.S

1240 MK on 2nd Well Pic 17
taken on SE direction

1242 Westerly shot of lot
Pic #16

1310 Wrap-up talk w/ Jack Grimmer
& Bill Lewis.

1410 Pic #15 shot taken toward on North
of T. River app. 500 ft from (North)
Rt 41 Bridge

3/21/93

3/21/93

(16)

1415 Pic #14 of Pipe that out let of Storm Sewer. end of Central Ave

1416 Pic #13 outlet of Sewer in relation to River 50' in direction of SE

1420 Video at Central Ave from River to Rubbermaid

shots of 2 house surrounded by Rubbermaid

1425 Pic #12 House on Right South side of Rubbermaid Prop.

Pic #11 House on Left Facing South side of Property

[signature] 3/21/95

(17)

- Natrium Products Bldg appears to cover most of the property appox. 6' from curve on Court St. Truck was being loaded with Cement Behind prop on west side 2 Railroad Tracks beside property. Back side of property indicates covered with the building no open area.

Pic # 10 - (West side) of Central Ave Facing East Toward Rubbermaid

Pic # 9 same location (as #10) backside of Natrium Products.

1440 Pic # 8, 7, 6, 5 Pan from South of Elm St. Just West of the railroad tracks. Pan of shots from west to East.

[signature] 3/21/95

(18)

Pics 8, 7, 6, 5 include
NYS Electric & Gas, Road House
Mill & Northern Plastics Prop.

1445 Pic #4 of back area East side
of Northern Plastics.

- Beer Distrib. — Ben J. Ardito
at NE corner of Rubbermaid.
Building our paved lot occupies
all the property.

1450 Northern side of Northern
Plastics. Property appears to
be completely fenced in. Parking
lot is located on the Northern side
off Clinton Ave.

3/21/95

(19)

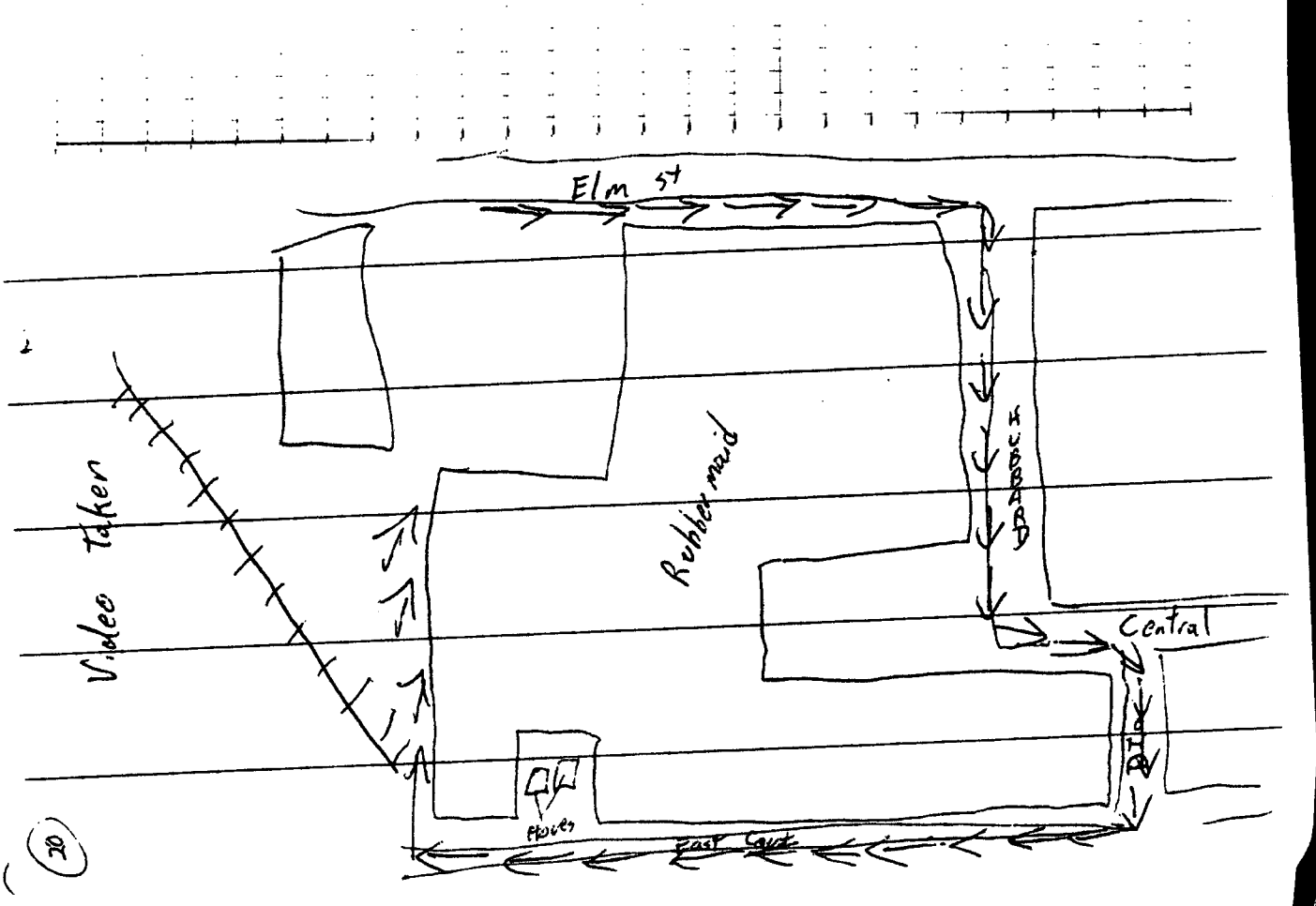
1452 Pic # 3, 2, 1

Taking in Southerly Direction
accross Clinton Ave. Pics of
the Northern Plastics Prop.
Now for ~~sale~~ Sale
sign in front of Bldg.
Interstate 81 Industrial
complex 75 Clinton St.

1454 to 1504 Drive around
Rubbermaid Prop. from Elm
to East Court St. clockwise

1510 Head out.

3/21/95


Elm St
Video taken
Rubbermaid
HUBBARD
Central
Stoves
East Court

(20)

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: M. Kumar **Date:** 3/22/95 **Picture:** #27 **Negative:** #25

A picture of Jeff Martin standing on the location of GW-2.

Site Name: Brookway Motor Trucks
Photographer: M. Kumar

Location: Cortland, New York
Date: 3/22/95 **Picture:** #26 **Negative:** #24

A picture of Jeff Martin standing on the location of GW-1.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: M. Kumar **Date:** 3/22/95 **Picture:** #25 **Negative:** #23

A picture of Jeff Martin standing of the location of GW-3.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #24 **Negative:** #22

Pictures #24 and #23 are a pan of the south and west side of the beer distributer's property. The pictures are taken in a northwest direction.

Site Name: Brookway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #23 **Negative:** #21

See picture #24.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #22 **Negative:** #20

A picture of a dry well located in near the Beer Distributer.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #19 **Negative:** #17

Shot eastward down Central Avenue from Rubbermaid. The storm sewer runs straight to river underneath Central Avenue.

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #18 **Negative:** #16

Mohan Kumar standing a dry well in Trailer Parking Area. The picture is taken in a east-southeast direction.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #17 **Negative:** #15

Mohan Kumar standing a dry well in Trailer Parking Area. The picture is taken in a southeast direction.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #16 **Negative:** #14

A picture of Trailer Parking Area, taken in western direction from the eastside of the lot. The Corset Company building in the background.

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #15 **Negative:** #13

Shot taken toward the north of the Tioughnioga River. Approximately 500 ft. north of Rt. 41 bridge.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #14 **Negative:** #12

Mouth of the storm sewer outlet (from Central Avenue) going into the Tioughnioga River.

Site Name: Brockway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #13 **Negative:** #11

Top of storm sewer outlet with the Tioughnioga River in background.

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #12 **Negative:** #10

Pictures #10 and #9 are a pan of 2 houses on East Court Street just south of Rubbermaid, taken in a north and northwest direction.

Site Name: Brockway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #11 **Negative:** #9

See picture #10.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #10 **Negative:** #8

A picture of the westernside of Rubbermaid, taken from Central Avenue facing east.

Site Name: Brookway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #9 **Negative:** #7

Backside of Natrium Products Building. Taken from Central Avenue facing south.

Site Name: Brockway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #8 **Negative:** #6

Pictures #8, #7, #6, and #5 are taken from South of Elm Street just west of the Rail Road Tracks. The pictures are a pan from westside to eastside of properties.

Site Name: Brockway Motor Trucks
Photographer: J. Martin

Location: Cortland, New York
Date: 3/22/95 **Picture:** #7 **Negative:** #5

See picture #8.

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #6 **Negative:** #4

See picture #8.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #5 **Negative:** #3

See picture #8.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #4 **Negative:** #2

Back area of Northern Plastics from Elm Street. Picture is taken facing north across Elm Street.

Site Name: Brookway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #3 **Negative:** #1

Pictures #3, #2 and #1 are a pan of Northside of Northern Plastics Bldg. from Clinton Ave. Pictures are taken facing southwest to south.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #2 **Negative:** #0

See picture #3.

Site Name: Brockway Motor Trucks **Location:** Cortland, New York
Photographer: J. Martin **Date:** 3/22/95 **Picture:** #1 **Negative:** #00

See picture #3.

Reference 9

02-8704-17-SR
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
BROCKWAY MOTOR TRUCKS
CORTLAND, NEW YORK

COMPLETED

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8704-17
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

JUNE 10, 1988

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

Richard Pagano

RICHARD PAGANO
SITE MANAGER

REVIEWED/APPROVED BY:

Ronald M. Naman

RONALD M. NAMAN
FIT OFFICE MANAGER

TABLE 1
SAMPLE DESCRIPTIONS
BROCKWAY MOTOR TRUCKS
CORTLAND, NEW YORK
CASE #7570
07/08/87

Sample ID Number	Organic Traffic Report #	Inorganic Traffic Report #	Time	Sample Type
NY86-GW1	BK526	MBK714	1330	Aqueous MS/MSD*
NY86-GW2	BK527	MBK715	1415	Aqueous
NY86-GW3	BK528	MBK716	1445	Aqueous
NY86-S1	BK530	MBK718	1545	Soil MS/MSD*
NY86-S2	BK531	MBK719	1623	Soil
NY86-S3	BK532	MBK720	1645	Soil
NY86-BL1	BK529	N/A	N/A	Aqueous Trip Blank
NY86-BL2	BK537	N/A	N/A	Aqueous Trip Blank
NY86-RIN1	BK535	MBK723	1310	Aqueous Rinsate Blank
NY86-RIN2	BK536	MBK724	1430	Aqueous Rinsate Blank

*MS/MSD - Indicates that a sample was designated as a matrix spike (M

SOUTHWEST RESEARCH INSTITUTE

Number

-526

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK526-
Sample Matrix: Water
Data Release Authorized By:
Jo Ann Irwin

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH 7
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	7 B	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

. No: BK-526
No: BK526
se No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

GPC Cleanup NO

Concentration: Low
Date Extracted/Prepared: 07/13/87

Separatory Funnel Extraction--YES

Date Analyzed: 07/23/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

e No: EK-526
No: EK526
se No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

GPC Cleanup NO

Concentration: Low
Date Extracted/Prepared: 07/13/87

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

No. ER-526
No. ER526
No. 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
**********				
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 714

Date 5/13/52

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7510

SOW NO. 7/85

Lab Receipt Date 7/13/87

LAB SAMPLE ID. NO. 3707042-01

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	94800	P	13.	Magnesium	190,000	P
2.	Antimony	[44]	P	14.	Manganese	4040	P
3.	Arsenic	10u N	F	15.	Mercury	0.6	A
4.	Barium	980	P	16.	Nickel	237 J	P
5.	Beryllium	[2.9]	P	17.	Potassium	11100	A
6.	Cadmium	111 J	P	18.	Selenium	25u N	F
7.	Calcium	534000 *	P	19.	Silver	10u	F
8.	Chromium	104	P	20.	Sodium	43200	P
9.	Cobalt	78	P	21.	Thallium	50u N	F
10.	Copper	1080	P	22.	Vanadium	189	P
11.	Iron	52500	P	23.	Zinc	1160 NE	P
12.	Lead	323	P		Precent Solids (%)		

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown, opaque; Sample diluted by 5X for Tl, Se

Lab Manager [illegible]

IFB Amend. One

NY86-6W2

ORG. No. - BK527

INORG. No - MBK715

case No- 7570

SOUTHWEST RESEARCH INSTITUTE

Number

27

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK527-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH 7
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	~~260 B,J~~	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-527 DILUTION

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK527DL-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 2.5 pH NA
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	25U	78-87-5	1,2-Dichloropropane	13U
74-83-9	Bromomethane	25U	10061-02-6	Trans-1,3-Dichloropropene	13U
75-01-4	Vinyl Chloride	25U	79-01-6	Trichloroethene	13U
75-00-3	Chloroethane	25U	124-48-1	Dibromochloromethane	13U
75-09-2	Methylene Chloride	13U	79-00-5	1,1,2-Trichloroethane	13U
67-64-1	Acetone	23~~U~~ B	71-43-2	Benzene	13U
75-15-0	Carbon Disulfide	13U	10061-01-5	Cis-1,3-Dichloropropene	13U
75-35-4	1,1-Dichloroethene	13U	110-75-8	2-Chloroethylvinylether	25U
75-34-3	1,1-Dichloroethane	13U	75-25-2	Bromoform	13U
156-60-5	Trans-1,2-Dichloroethene	13U	591-78-6	4-Methyl-2-Pentanone	25U
67-66-3	Chloroform	13U	108-10-1	2-Hexanone	25U
107-06-2	1,2-Dichloroethane	13U	127-18-4	Tetrachloroethene	13U
78-93-3	2-Butanone	25U	79-34-5	1,1,2,2-Tetrachloroethane	13U
71-55-6	1,1,1-Trichloroethane	13U	108-88-3	Toluene	13U
56-23-5	Carbon Tetrachloride	13U	108-90-7	Chlorobenzene	13U
108-05-4	Vinyl Acetate	25U	100-41-4	Ethylbenzene	13U
75-27-4	Bromodichloromethane	13U	100-42-5	Styrene	13U
				Total Xylenes	13U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Le No: BK-527
No: BK527
e No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

GPC Cleanup NO

Concentration: Low
Date Extracted/Prepared: 07/13/87

Separatory Funnel Extraction--YES

Date Analyzed: 07/23/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol-	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

3 U51

ple No: BK-527
ab No: BK527
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

GPC Cleanup NO

Concentration: Low
Date Extracted/Prepared: 07/13/87

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

ple No: EK-527
ab No: EK527
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 715

Date 8/13/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7513

SOW NO. 7/85

Lab Receipt Date 7/23/87

LAB SAMPLE ID. NO. 8703042-02

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	8360	P	13.	Magnesium	25,000	P
2.	Antimony	37u	P	14.	Manganese	351	P
3.	Arsenic	10u N	F	15.	Mercury	0.2u	A
4.	Barium	[151]	P	16.	Nickel	[23] J	P
5.	Beryllium	0.5u	P	17.	Potassium	[3380]	A
6.	Cadmium	[1.3] J	P	18.	Selenium	5.0u N	F
7.	Calcium	103,000 ~~105,000~~ *	P	19.	Silver	10u	F
8.	Chromium	19	P	20.	Sodium	40100	P
9.	Cobalt	[9]	P	21.	Thallium	10u N	F
10.	Copper	31	P	22.	Vanadium	[24]	P
11.	Iron	17000	P	23.	~~Zinc~~	90 NE	P
12.	Lead	26 N	F		Precent Solids (%)		

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Light brown, cloudy

Lab Manager R.A. Kunihiro

NY 86 - GW3

ORG. NO. - BK528

INORG NO. - MBK 716

CASE NO. - 7570

SOUTHWEST RESEARCH INSTITUTE

3 064

Number

BK-528

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK528-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH 7
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	~~5~~	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	~~8~~ B	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	10U	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	5U
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

3 065

Sample No: BK-528
Lab No: BK528
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

GPC Cleanup NO

Concentration: Low
Date Extracted/Prepared: 07/13/87

Separatory Funnel Extraction--YES

Date Analyzed: 07/23/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
108-95-2	Phenol	10U
111-44-4	bis(2-Chloroethyl)Ether	10U
95-57-8	2-Chlorophenol	10U
541-73-1	1,3-Dichlorobenzene	10U
106-46-7	1,4-Dichlorobenzene	10U
100-51-6	Benzyl Alcohol	10U
95-50-1	1,2-Dichlorobenzene	10U
95-48-7	2-Methylphenol	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U
106-44-5	4-Methylphenol	10U
621-64-7	N-Nitroso-Di-n-Propylamine	10U
67-72-1	Hexachloroethane	10U
98-95-3	Nitrobenzene	10U
78-59-1	Isophorone	10U
88-75-5	2-Nitrophenol	10U
105-67-9	2,4-Dimethylphenol	10U
65-85-0	Benzoic Acid	50U
111-91-1	bis(2-Chloroethoxy)Methane	10U
120-83-2	2,4-Dichlorophenol	10U
120-82-1	1,2,4-Trichlorobenzene	10U
91-20-3	Naphthalene	10U
106-47-8	4-Chloroaniline	10U
87-68-3	Hexachlorobutadiene	10U
59-50-7	4-Chloro-3-Methylphenol	10U
91-57-6	2-Methylnaphthalene	10U
77-47-4	Hexachlorocyclopentadiene	10U
88-06-2	2,4,6-Trichlorophenol	10U
95-95-4	2,4,5-Trichlorophenol	50U
91-58-7	2-Chloronaphthalene	10U
88-74-4	2-Nitroaniline	50U
131-11-3	Dimethyl Phthalate	10U
208-96-8	Acenaphthylene	10U
99-09-2	3-Nitroaniline	50U

CAS Number		ug/l
83-32-9	Acenaphthene	10U
51-28-5	2,4-Dinitrophenol	50U
100-02-7	4-Nitrophenol	50U
132-64-9	Dibenzofuran	10U
121-14-2	2,4-Dinitrotoluene	10U
606-20-2	2,6-Dinitrotoluene	10U
84-66-2	Diethylphthalate	10U
7005-72-3	4-Chlorophenylphenylether	10U
86-73-7	Fluorene	10U
100-01-6	4-Nitroaniline	50U
534-52-1	4,6-Dinitro-2-Methylphenol	50U
86-30-6	N-Nitrosodiphenylamine(1)	10U
101-55-3	4-Bromophenylphenylether	10U
118-74-1	Hexachlorobenzene	10U
87-86-5	Pentachlorophenol	50U
85-01-8	Phenanthrene	10U
120-12-7	Anthracene	10U
84-74-2	Di-n-Butylphthalate	10U
206-44-0	Fluoranthene	10U
129-00-0	Pyrene	10U
85-68-7	Butylbenzylphthalate	10U
91-94-1	3,3'-Dichlorobenzidine	20U
56-55-3	Benzo(a)Anthracene	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	10U
218-01-9	Chrysene	10U
117-84-0	Di-n-Octyl Phthalate	10U
205-99-2	Benzo(b)Fluoranthene	10U
207-08-9	Benzo(k)Fluoranthene	10U
50-32-8	Benzo(a)Pyrene	10U
193-39-5	Indeno(1,2,3-cd)Pyrene	10U
53-70-3	Dibenz(a,h)Anthracene	10U
191-24-2	Benzo(g,h,i)Perylene	10U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

3 066

Sample No: BK-528
Lab No: BK528
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

3 066

Sample No: BK-528
Lab No: BK528
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

3 067

ple No: BK-528
Lab No: BK528
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 7[illegible]

Date 8/13/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7570

SOW NO. 7/85

Lab Receipt Date 7/31/87

LAB SAMPLE ID. NO. 8707042-03

QC REPORT NO.

Elements Identified and Measured

Concentration: Low X Medium

Matrix: Water X Soil Sludge Other

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	15900	P	13.	Magnesium	32,000	P
2.	Antimony	27u	P	14.	Manganese	1150	P
3.	Arsenic	10u ~~15900~~	P F	15.	Mercury	0.2u	A
4.	Barium	310	P	16.	Nickel	48 T	P
5.	Beryllium	0.5u	P	17.	Potassium	[3010]	A
6.	Cadmium	10 T	P	18.	Selenium	5.0u N	F
7.	Calcium	~~[20400]~~ 92800	P	19.	Silver	10u	F
8.	Chromium	56	P	20.	Sodium	39600	P
9.	Cobalt	[21]	P	21.	Thallium	10u N	F
10.	Copper	73	P	22.	Vanadium	[40]	P
11.	Iron	54100	P	23.	~~Zinc~~	~~138 u E~~	~~P~~
12.	Lead	50	P		Precent Solids (%)		

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Light brown, cloudy

Lab Manager [illegible]

IFB Amend. One

NY 86 - BLK-2 (S)

ORG. NO. - BK 537

INORG. NO. - NA

CASE NO. - 7570

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-537

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK537-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH NA
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	16 B	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	24	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	10
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No. BK-537
Lab No: BK537
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
NO VOA COMPOUND FOUND				

Form I, Part B

NY 86 - BLK-1(N)

ORG. NO. - BK529

INORG. NO. - NA

CASE NO - 7570

SOUTHWEST RESEARCH INSTITUTE

3 093

ple Number

BK-529

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK529-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH NA
Percent Moisture (Not Decanted): NA

CAS Number			ug/l
74-87-3	Chloromethane		10U
74-83-9	Bromomethane		10U
75-01-4	Vinyl Chloride		10U
75-00-3	Chloroethane		10U
75-09-2	Methylene Chloride	8	
67-64-1	Acetone	[illegible]	
75-15-0	Carbon Disulfide		5U
75-35-4	1,1-Dichloroethene		5U
75-34-3	1,1-Dichloroethane		5U
156-60-5	Trans-1,2-Dichloroethene		5U
67-66-3	Chloroform		5U
107-06-2	1,2-Dichloroethane		5U
78-93-3	2-Butanone	26	
71-55-6	1,1,1-Trichloroethane		5U
56-23-5	Carbon Tetrachloride		5U
108-05-4	Vinyl Acetate		10U
75-27-4	Bromodichloromethane		5U

CAS Number			ug/l
78-87-5	1,2-Dichloropropane		5U
10061-02-6	Trans-1,3-Dichloropropene		5U
79-01-6	Trichloroethene		5U
124-48-1	Dibromochloromethane		5U
79-00-5	1,1,2-Trichloroethane		5U
71-43-2	Benzene		5U
10061-01-5	Cis-1,3-Dichloropropene		5U
110-75-8	2-Chloroethylvinylether		10U
75-25-2	Bromoform		5U
591-78-6	4-Methyl-2-Pentanone		10U
108-10-1	2-Hexanone		10U
127-18-4	Tetrachloroethene		5U
79-34-5	1,1,2,2-Tetrachloroethane		5U
108-88-3	Toluene	11	
108-90-7	Chlorobenzene		5U
100-41-4	Ethylbenzene		5U
100-42-5	Styrene		5U
	Total Xylenes		5U

Data Reporting Qualifiers

lues If the result is a value greater than or equal to the detection limit, report the value.
Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.
Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.
This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.
B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.
spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

3 094

Sample No: BK-529
Lab No: BK529
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
NO VOA COMPOUND FOUND				

Form I, Part B

NY 86- RIN-1

ORG NO - BK535

INORG NO - MBK723

CASE - 7570

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-535

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK535-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH 6
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	36 B	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroethylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	13	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	2 J
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-535
Lab No: BK535
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction--YES

Date Analyzed: 07/23/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	100	83-32-9	Acenaphthene	100
111-44-4	bis(2-Chloroethyl)Ether	100	51-28-5	2,4-Dinitrophenol	500
95-57-8	2-Chlorophenol	100	100-02-7	4-Nitrophenol	500
541-73-1	1,3-Dichlorobenzene	100	132-64-9	Dibenzofuran	100
106-46-7	1,4-Dichlorobenzene	100	121-14-2	2,4-Dinitrotoluene	100
100-51-6	Benzyl Alcohol	100	606-20-2	2,6-Dinitrotoluene	100
95-50-1	1,2-Dichlorobenzene	100	84-66-2	Diethylphthalate	100
95-48-7	2-Methylphenol	100	7005-72-3	4-Chlorophenylphenylether	100
39638-32-9	bis(2-Chloroisopropyl)Ether	100	86-73-7	Fluorene	100
106-44-5	4-Methylphenol	100	100-01-6	4-Nitroaniline	500
621-64-7	N-Nitroso-Di-n-Propylamine	100	534-52-1	4,6-Dinitro-2-Methylphenol	500
67-72-1	Hexachloroethane	100	86-30-6	N-Nitrosodiphenylamine(1)	100
98-95-3	Nitrobenzene	100	101-55-3	4-Bromophenylphenylether	100
78-59-1	Isophorone	100	118-74-1	Hexachlorobenzene	100
88-75-5	2-Nitrophenol	100	87-86-5	Pentachlorophenol	500
105-67-9	2,4-Dimethylphenol	100	85-01-8	Phenanthrene	100
65-85-0	Benzoic Acid	500	120-12-7	Anthracene	100
111-91-1	bis(2-Chloroethoxy)Methane	100	84-74-2	Di-n-Butylphthalate	100
120-83-2	2,4-Dichlorophenol	100	206-44-0	Fluoranthene	100
120-82-1	1,2,4-Trichlorobenzene	100	129-00-0	Pyrene	100
91-20-3	Naphthalene	100	85-68-7	Butylbenzylphthalate	100
106-47-8	4-Chloroaniline	100	91-94-1	3,3'-Dichlorobenzidine	200
87-68-3	Hexachlorobutadiene	100	56-55-3	Benzo(a)Anthracene	100
59-50-7	4-Chloro-3-Methylphenol	100	117-81-7	bis(2-Ethylhexyl)Phthalate	100
91-57-6	2-Methylnaphthalene	100	218-01-9	Chrysene	100
77-47-4	Hexachlorocyclopentadiene	100	117-84-0	Di-n-Octyl Phthalate	100
88-06-2	2,4,6-Trichlorophenol	100	205-99-2	Benzo(b)Fluoranthene	100
95-95-4	2,4,5-Trichlorophenol	500	207-08-9	Benzo(k)Fluoranthene	100
91-58-7	2-Chloronaphthalene	100	50-32-8	Benzo(a)Pyrene	100
88-74-4	2-Nitroaniline	500	193-39-5	Indeno(1,2,3-cd)Pyrene	100
131-11-3	Dimethyl Phthalate	100	53-70-3	Dibenz(a,h)Anthracene	100
208-96-8	Acenaphthylene	100	191-24-2	Benzo(g,h,i)Perylene	100
99-09-2	3-Nitroaniline	500			

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

Sample No: EK-835
Lab No: EK535
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-535
Lab No: BK535
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 723

Date 8/13/89

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7579

SOW NO. 7/85

Lab Receipt Date 7/[illegible]

LAB SAMPLE ID. NO. 8707042-04

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	[88]	P	13.	Magnesium	40u	P
2.	Antimony	27u	P	14.	Manganese	1.3u	P
3.	Arsenic	10u N	F	15.	Mercury	0.2u	A
4.	Barium	20u	P	16.	Nickel	8.4u J	P
5.	Beryllium	0.5u	P	17.	Potassium	[320]	A
6.	Cadmium	0.9u J	P	18.	Selenium	5.0u N	F
7.	Calcium	442u *	P	19.	Silver	10u	F
8.	Chromium	[3.5]	P	20.	Sodium	783u	P
9.	Cobalt	5.9u	P	21.	Thallium	10u N	F
10.	Copper	4.4u	P	22.	Vanadium	16u	P
11.	~~Iron~~	~~[87]~~	~~P~~	23.	Zinc	[15] NE	P
12.	Lead	5.0u N	F		Precent Solids (%)		

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Solutions clear.

Lab Manager [signature]

NY86-RIN-2

ORG. No. - BK536

INORG. No. - MBK724

Case No - 7570

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-536

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK536-
Sample Matrix: Water
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/13/87
Conc/Dil Factor: 1 pH 6
Percent Moisture (Not Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
74-87-3	Chloromethane	10U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	10U	10061-02-6	Trans-1,3-Dichloropropene	5U
75-01-4	Vinyl Chloride	10U	79-01-6	Trichloroethene	5U
75-00-3	Chloroethane	10U	124-48-1	Dibromochloromethane	5U
75-09-2	Methylene Chloride	5U	79-00-5	1,1,2-Trichloroethane	5U
67-64-1	Acetone	26 B	71-43-2	Benzene	5U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	5U
75-35-4	1,1-Dichloroethene	5U	110-75-8	2-Chloroetaylvinylether	10U
75-34-3	1,1-Dichloroethane	5U	75-25-2	Bromoform	5U
156-60-5	Trans-1,2-Dichloroethene	5U	591-78-6	4-Methyl-2-Pentanone	10U
67-66-3	Chloroform	5U	108-10-1	2-Hexanone	10U
107-06-2	1,2-Dichloroethane	5U	127-18-4	Tetrachloroethene	5U
78-93-3	2-Butanone	22	79-34-5	1,1,2,2-Tetrachloroethane	5U
71-55-6	1,1,1-Trichloroethane	5U	108-88-3	Toluene	6
56-23-5	Carbon Tetrachloride	5U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	10U	100-41-4	Ethylbenzene	5U
75-27-4	Bromodichloromethane	5U	100-42-5	Styrene	5U
				Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-536
Lab No: BK536
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction--YES

Date Analyzed: 07/23/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l	CAS Number		ug/l
108-95-2	Phenol	10U	83-32-9	Acenaphthene	10U
111-44-4	bis(2-Chloroethyl)Ether	10U	51-28-5	2,4-Dinitrophenol	50U
95-57-8	2-Chlorophenol	10U	100-02-7	4-Nitrophenol	50U
541-73-1	1,3-Dichlorobenzene	10U	132-64-9	Dibenzofuran	10U
106-46-7	1,4-Dichlorobenzene	10U	121-14-2	2,4-Dinitrotoluene	10U
100-51-6	Benzyl Alcohol	10U	606-20-2	2,6-Dinitrotoluene	10U
95-50-1	1,2-Dichlorobenzene	10U	84-66-2	Diethylphthalate	10U
95-48-7	2-Methylphenol	10U	7005-72-3	4-Chlorophenylphenylether	10U
39638-32-9	bis(2-Chloroisopropyl)Ether	10U	86-73-7	Fluorene	10U
106-44-5	4-Methylphenol	10U	100-01-6	4-Nitroaniline	50U
621-64-7	N-Nitroso-Di-n-Propylamine	10U	534-52-1	4,6-Dinitro-2-Methylphenol	50U
67-72-1	Hexachloroethane	10U	86-30-6	N-Nitrosodiphenylamine(1)	10U
98-95-3	Nitrobenzene	10U	101-55-3	4-Bromophenylphenylether	10U
78-59-1	Isophorone	10U	118-74-1	Hexachlorobenzene	10U
88-75-5	2-Nitrophenol	10U	87-86-5	Pentachlorophenol	50U
105-67-9	2,4-Dimethylphenol	10U	85-01-8	Phenanthrene	10U
65-85-0	Benzoic Acid	50U	120-12-7	Anthracene	10U
111-91-1	bis(2-Chloroethoxy)Methane	10U	84-74-2	Di-n-Butylphthalate	10U
120-83-2	2,4-Dichlorophenol	10U	206-44-0	Fluoranthene	10U
120-82-1	1,2,4-Trichlorobenzene	10U	129-00-0	Pyrene	10U
91-20-3	Naphthalene	10U	85-68-7	Butylbenzylphthalate	10U
106-47-8	4-Chloroaniline	10U	91-94-1	3,3'-Dichlorobenzidine	20U
87-68-3	Hexachlorobutadiene	10U	56-55-3	Benzo(a)Anthracene	10U
59-50-7	4-Chloro-3-Methylphenol	10U	117-81-7	bis(2-Ethylhexyl)Phthalate	10U
91-57-6	2-Methylnaphthalene	10U	218-01-9	Chrysene	10U
77-47-4	Hexachlorocyclopentadiene	10U	117-84-0	Di-n-Octyl Phthalate	10U
88-06-2	2,4,6-Trichlorophenol	10U	205-99-2	Benzo(b)Fluoranthene	10U
95-95-4	2,4,5-Trichlorophenol	50U	207-08-9	Benzo(k)Fluoranthene	10U
91-58-7	2-Chloronaphthalene	10U	50-32-8	Benzo(a)Pyrene	10U
88-74-4	2-Nitroaniline	50U	193-39-5	Indeno(1,2,3-cd)Pyrene	10U
131-11-3	Dimethyl Phthalate	10U	53-70-3	Dibenz(a,h)Anthracene	10U
208-96-8	Acenaphthylene	10U	191-24-2	Benzo(g,h,i)Perylene	10U
99-09-2	3-Nitroaniline	50U			

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-536
Lab No: BK536
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
Date Extracted/Prepared: 07/13/87

GPC Cleanup NO

Separatory Funnel Extraction - YES

Date Analyzed: 07/31/87
Conc/Dil Factor: 1.00
Percent Moisture (Decanted): NA

CAS Number		ug/l
319-84-6	Alpha-BHC	0.05U
319-85-7	Beta-BHC	0.05U
319-86-8	Delta-BHC	0.05U
58-89-9	Gamma-BHC (Lindane)	0.05U
76-44-8	Heptachlor	0.05U
309-00-2	Aldrin	0.05U
1024-57-3	Heptachlor Epoxide	0.05U
959-98-8	Endosulfan I	0.05U
60-57-1	Dieldrin	0.10U
72-55-9	4,4'-DDE	0.10U
72-20-8	Endrin	0.10U
33213-65-9	Endosulfan II	0.10U
72-54-8	4,4'-DDD	0.10U
1031-07-8	Endosulfan Sulfate	0.10U
50-29-3	4,4'-DDT	0.10U
72-43-5	Methoxychlor	0.50U
53494-70-5	Endrin Ketone	0.10U
57-74-9	Chlordane	0.50U
8001-35-2	Toxaphene	1.00U
12674-11-2	Aroclor-1016	0.50U
11104-28-2	Aroclor-1221	0.50U
11141-16-5	Aroclor-1232	0.50U
53469-21-9	Aroclor-1242	0.50U
12672-29-6	Aroclor-1248	0.50U
11097-69-1	Aroclor-1254	1.00U
11096-82-5	Aroclor-1260	1.00U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) 1000 or W(s) V(t) 10000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-536
Lab No: BK536
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/l
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

INORGANIC DATA QUALIFIER

Footnotes:

NR	-	not required by contract at this time.
Form I:		
Value	-	If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (i.e., [10]. Indicate the analytical method used with P (for ICP/Flame AA) or F (for furnace).
U	-	Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., 10U).
E	-	Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
S	-	Indicates value determined by Method of Standard Addition.
R	-	Indicates spike sample recovery is not within control limits.
*	-	Indicates duplicate analysis is not within control limits.
+	-	Indicates the correlation coefficient for method of standard addition is less than 0.995.
M	-	Duplicate injection results exceed control limits reported as "u".
N	-	Spike sample recovery is not within control limits reported as "u".
(Red Lined)	-	Did not pass MMB QA/QC results invalid.
B	-	It is a concentration qualifier and is suffixed with the result on Form I if the absolute concentration is less than CRDL but greater than or equal to detection limit.
W	-	It is a qualifier and is suffixed with the result if post-digestion spike recovery is out of control limits (85-115%), while sample absorbence (or conc.) is less than 50% of spike absorbence (or conc.). The result is reported as undetected (flaggered with a "U". Reported as "u".

ORGANIC DATA REPORTING QUALIFIERS

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of such flags must be explicit.

Value -If the result is a value greater than or equal to the detection limit, report the value.

U -Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J -Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g., 10J)

C -This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides $\geq$10 ng/ul in the final extract should be confirmed by GC/MS.

B -This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other -Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NY 86- 51

ORG No. - BK530

INORG No. - MBK 718

case no - 7570

SOUTHWEST RESEARCH INSTITUTE

Number

BK-530

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK530-
Sample Matrix: Soil
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/16/87
Date Analyzed: 07/16/87
Conc/Dil Factor: 1 pH 7
Percent Moisture (Not Decanted): 9.57

CAS Number			ug/kg
74-87-3	Chloromethane		11U
74-83-9	Bromomethane		11U
75-01-4	Vinyl Chloride		11U
75-00-3	Chloroethane		11U
75-09-2	Methylene Chloride	J	
67-64-1	Acetone	3 B	
75-15-0	Carbon Disulfide		5U
75-35-4	1,1-Dichloroethene		5U
75-34-3	1,1-Dichloroethane		5U
156-60-5	Trans-1,2-Dichloroethene		5U
67-66-3	Chloroform	5 J	
107-06-2	1,2-Dichloroethane		5U
78-93-3	2-Butanone		11U
71-55-6	1,1,1-Trichloroethane		5U
56-23-5	Carbon Tetrachloride		5U
108-05-4	Vinyl Acetate		11U
75-27-4	Bromodichloromethane		5U

CAS Number		ug/kg
78-87-5	1,2-Dichloropropane	5U
10061-02-6	Trans-1,3-Dichloropropene	5U
79-01-6	Trichloroethene	5U
124-48-1	Dibromochloromethane	5U
79-00-5	1,1,2-Trichloroethane	5U
71-43-2	Benzene	5U
10061-01-5	Cis-1,3-Dichloropropene	5U
110-75-8	2-Chloroethylvinylether	11U
75-25-2	Bromoform	5U
591-78-6	4-Methyl-2-Pentanone	11U
108-10-1	2-Hexanone	11U
127-18-4	Tetrachloroethene	5U
79-34-5	1,1,2,2-Tetrachloroethane	5U
108-88-3	Toluene	5U
108-90-7	Chlorobenzene	5U
100-41-4	Ethylbenzene	5U
100-42-5	Styrene	5U
	Total Xylenes	5U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

3 109

Sample No: BK-530
Lab No: BK530
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/22/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

GPC Cleanup YES

CAS Number		ug/kg
108-95-2	Phenol	7290
111-44-4	bis(2-Chloroethyl)Ether	7290
95-57-8	2-Chlorophenol	7290
541-73-1	1,3-Dichlorobenzene	7290
106-46-7	1,4-Dichlorobenzene	7290
100-51-6	Benzyl Alcohol	7290
95-50-1	1,2-Dichlorobenzene	7290
95-48-7	2-Methylphenol	7290
39638-32-9	bis(2-Chloroisopropyl)Ether	7290
106-44-5	4-Methylphenol	7290
621-64-7	N-Nitroso-Di-n-Propylamine	7290
67-72-1	Hexachloroethane	7290
98-95-3	Nitrobenzene	7290
78-59-1	Isophorone	7290
88-75-5	2-Nitrophenol	7290
105-67-9	2,4-Dimethylphenol	7290
65-85-0	Benzoic Acid	35360
111-91-1	bis(2-Chloroethoxy)Methane	7290
120-83-2	2,4-Dichlorophenol	7290
120-82-1	1,2,4-Trichlorobenzene	7290
91-20-3	Naphthalene	7290
106-47-8	4-Chloroaniline	7290
87-68-3	Hexachlorobutadiene	7290
59-50-7	4-Chloro-3-Methylphenol	7290
91-57-6	2-Methylnaphthalene	7290
77-47-4	Hexachlorocyclopentadiene	7290
88-06-2	2,4,6-Trichlorophenol	7290
95-95-4	2,4,5-Trichlorophenol	35360
91-58-7	2-Chloronaphthalene	7290
88-74-4	2-Nitroaniline	35360
131-11-3	Dimethyl Phthalate	7290
208-96-8	Acenaphthylene	7290
99-09-2	3-Nitroaniline	35360

CAS Number		ug/kg
83-32-9	Acenaphthene	7290
51-28-5	2,4-Dinitrophenol	35360
100-02-7	4-Nitrophenol	35360
132-64-9	Dibenzofuran	7290
121-14-2	2,4-Dinitrotoluene	7290
606-20-2	2,6-Dinitrotoluene	7290
84-66-2	Diethylphthalate	7290
7005-72-3	4-Chlorophenylphenylether	7290
86-73-7	Fluorene	7290
100-01-6	4-Nitroaniline	35360
534-52-1	4,6-Dinitro-2-Methylphenol	35360
86-30-6	N-Nitrosodiphenylamine(1)	7290
101-55-3	4-Bromophenylphenylether	7290
118-74-1	Hexachlorobenzene	7290
87-86-5	Pentachlorophenol	35360
85-01-8	Phenanthrene	7290
120-12-7	Anthracene	7290
84-74-2	Di-n-Butylphthalate	~~4900~~ B
206-44-0	Fluoranthene	7290
129-00-0	Pyrene	7290
85-68-7	Butylbenzylphthalate	7290
91-94-1	3,3'-Dichlorobenzidine	14590
56-55-3	Benzo(a)Anthracene	7290
117-81-7	bis(2-Ethylhexyl)Phthalate	7290
218-01-9	Chrysene	7290
117-84-0	Di-n-Octyl Phthalate	7290
205-99-2	Benzo(b)Fluoranthene	7290
207-08-9	Benzo(k)Fluoranthene	7290
50-32-8	Benzo(a)Pyrene	7290
193-39-5	Indeno(1,2,3-cd)Pyrene	7290
53-70-3	Dibenz(a,h)Anthracene	7290
191-24-2	Benzo(g,h,i)Perylene	7290

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

3 110

Sample No: BK-530
Lab No: BK530
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low
GPC Cleanup YES
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/30/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

CAS Number		ug/kg
319-84-6	Alpha-BHC	17.68U
319-85-7	Beta-BHC	17.68U
319-86-8	Delta-BHC	17.68U
58-89-9	Gamma-BHC (Lindane)	17.68U
76-44-8	Heptachlor	17.68U
309-00-2	Aldrin	17.68U
1024-57-3	Heptachlor Epoxide	17.68U
959-98-8	Endosulfan I	17.68U
60-57-1	Dieldrin	35.36U
72-55-9	4,4'-DDE	35.36U
72-20-8	Endrin	35.36U
33213-65-9	Endosulfan II	35.36U
72-54-8	4,4'-DDD	35.36U
1031-07-8	Endosulfan Sulfate	35.36U
50-29-3	4,4'-DDT	35.36U
72-43-5	Methoxychlor	176.80U
53494-70-5	Endrin Ketone	35.36U
57-74-9	Chlordane	176.80U
8001-35-2	Toxaphene	353.60U
12674-11-2	Aroclor-1016	176.80U
11104-28-2	Aroclor-1221	176.80U
11141-16-5	Aroclor-1232	176.80U
53469-21-9	Aroclor-1242	176.80U
12672-29-6	Aroclor-1248	176.80U
11097-69-1	Aroclor-1254	353.60U
11096-82-5	Aroclor-1260	353.60U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) or W(s) 27.13 V(t) 40000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

3 111

ple No: BK-530
Lab No: BK530
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/kg
	NO SEMIVOLATILE COMPOUND FOUND			
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 118

Date 8/13/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7570

SOW NO. 7/85

Lab Receipt Date 7/10/87

LAB SAMPLE ID. NO. 8707042-06

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	15800 *	P	13.	Magnesium	19000 *	P
2.	Antimony	3.9u N J	P	14.	Manganese	716	P
3.	~~Arsenic~~	14 *	~~F~~	15.	Mercury	0.1u	A
4.	Barium	68 J	P	16.	Nickel	31 J	P
5.	Beryllium	[0.4]	P	17.	Potassium	[893]	A
6.	Cadmium	13 N J	P	18.	Selenium	1.1u	F
7.	Calcium	32200	P	19.	Silver	2.2u	F
8.	Chromium	15	P	20.	Sodium	170u ~~1715~~ NMS 8/13/87	P
9.	Cobalt	11	P	21.	Thallium	2.2u	F
10.	Copper	25	P	22.	Vanadium	22	P
11.	Iron	25600	P	23.	Zinc	157 E	P
12.	Lead	40	P		Precent Solids (%)	92.8 NMS 8/13/87	

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown, fine medium

Lab Manager [signature]

NY86-S2

ORG. No. - BK531

INOR. No. - MBK719

Case No. - 7570

SOUTHWEST RESEARCH INSTITUTE

Number

BK-531

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK531-
Sample Matrix: Soil
Data Release Authorized By:

Case No: 7570
GC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/16/87
Date Analyzed: 07/16/87
Conc/Dil Factor: 1 pH 6
Percent Moisture (Not Decanted): 22.7

CAS Number		ug/kg	CAS Number		ug/kg
74-87-3	Chloromethane	13U	78-87-5	1,2-Dichloropropane	5U
74-83-9	Bromomethane	13U	10061-02-6	Trans-1,3-Dichloropropene	6U
75-01-4	Vinyl Chloride	13U	79-01-6	Trichloroethene	6U
75-00-3	Chloroethane	13U	124-48-1	Dibromochloromethane	6U
75-09-2	Methylene Chloride	6U	79-00-5	1,1,2-Trichloroethane	6U
67-64-1	Acetone	~~3 B~~	71-43-2	Benzene	6U
75-15-0	Carbon Disulfide	5U	10061-01-5	Cis-1,3-Dichloropropene	6U
75-35-4	1,1-Dichloroethene	6U	110-75-8	2-Chloroethylvinylether	13U
75-34-3	1,1-Dichloroethane	8	75-25-2	Bromoform	6U
156-60-5	Trans-1,2-Dichloroethene	6U	591-78-6	4-Methyl-2-Pentanone	13U
67-66-3	Chloroform	5 J	108-10-1	2-Hexanone	13U
107-06-2	1,2-Dichloroethane	6U	127-18-4	Tetrachloroethene	6U
78-93-3	2-Butanone	13U	79-34-5	1,1,2,2-Tetrachloroethane	6U
71-55-6	1,1,1-Trichloroethane	930 J	108-88-3	Toluene	~~3 J~~
56-23-5	Carbon Tetrachloride	6U	108-90-7	Chlorobenzene	5U
108-05-4	Vinyl Acetate	13U	100-41-4	Ethylbenzene	6U
75-27-4	Bromodichloromethane	6U	100-42-5	Styrene	6U
				Total Xylenes	6U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

3 142

Sample No: BK-531
Lab No: BK531
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/22/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

GPC Cleanup YES

CAS Number		ug/kg
108-95-2	Phenol	855U
111-44-4	bis(2-Chloroethyl)Ether	855U
95-57-8	2-Chlorophenol	855U
541-73-1	1,3-Dichlorobenzene	855U
106-46-7	1,4-Dichlorobenzene	855U
100-51-6	Benzyl Alcohol	855U
95-50-1	1,2-Dichlorobenzene	855U
95-48-7	2-Methylphenol	855U
39638-32-9	bis(2-Chloroisopropyl)Ether	855U
106-44-5	4-Methylphenol	855U
621-64-7	N-Nitroso-Di-n-Propylamine	855U
67-72-1	Hexachloroethane	855U
98-95-3	Nitrobenzene	855U
78-59-1	Isophorone	855U
88-75-5	2-Nitrophenol	855U
105-67-9	2,4-Dimethylphenol	855U
65-85-0	Benzoic Acid	4144U
111-91-1	bis(2-Chloroethoxy)Methane	855U
120-83-2	2,4-Dichlorophenol	855U
120-82-1	1,2,4-Trichlorobenzene	855U
91-20-3	Naphthalene	855U
106-47-8	4-Chloroaniline	855U
87-68-3	Hexachlorobutadiene	855U
59-50-7	4-Chloro-3-Methylphenol	855U
91-57-6	2-Methylnaphthalene	855U
77-47-4	Hexachlorocyclopentadiene	855U
88-06-2	2,4,6-Trichlorophenol	855U
95-95-4	2,4,5-Trichlorophenol	4144U
91-58-7	2-Chloronaphthalene	855U
88-74-4	2-Nitroaniline	4144U
131-11-3	Dimethyl Phthalate	855U
208-96-8	Acenaphthylene	855U
99-09-2	3-Nitroaniline	4144U

CAS Number		ug/kg
83-32-9	Acenaphthene	855U
51-28-5	2,4-Dinitrophenol	4144U
100-02-7	4-Nitrophenol	4144U
132-64-9	Dibenzofuran	855U
121-14-2	2,4-Dinitrotoluene	855U
606-20-2	2,6-Dinitrotoluene	855U
84-66-2	Diethylphthalate	[illegible]B
7005-72-3	4-Chlorophenylphenylether	855U
86-73-7	Fluorene	855U
100-01-6	4-Nitroaniline	4144U
534-52-1	4,6-Dinitro-2-Methylphenol	4144U
86-30-6	N-Nitrosodiphenylamine(1)	855U
101-55-3	4-Bromophenylphenylether	855U
118-74-1	Hexachlorobenzene	855U
87-86-5	Pentachlorophenol	4144U
85-01-8	Phenanthrene	130 J
120-12-7	Anthracene	855U
84-74-2	Di-n-Butylphthalate	[illegible]B
206-44-0	Fluoranthene	500 J
129-00-0	Pyrene	450 J
85-68-7	Butylbenzylphthalate	855U
91-94-1	3,3'-Dichlorobenzidine	1709U
56-55-3	Benzo(a)Anthracene	855U
117-81-7	bis(2-Ethylhexyl)Phthalate	855U
218-01-9	Chrysene	855U
117-84-0	Di-n-Octyl Phthalate	855U
205-99-2	Benzo(b)Fluoranthene	410 J
207-08-9	Benzo(k)Fluoranthene	855U
50-32-8	Benzo(a)Pyrene	855U
193-39-5	Indeno(1,2,3-cd)Pyrene	855U
53-70-3	Dibenz(a,h)Anthracene	855U
191-24-2	Benzo(g,h,i)Perylene	855U

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

Lab No: EK531
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low GPC Cleanup YES
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/31/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

CAS Number		ug/kg
319-84-6	Alpha-BHC	20.72U
319-85-7	Beta-BHC	20.72U
319-86-8	Delta-BHC	20.72U
58-89-9	Gamma-BHC (Lindane)	20.72U
76-44-8	Heptachlor	20.72U
309-00-2	Aldrin	20.72U
1024-57-3	Heptachlor Epoxide	20.72U
959-98-8	Endosulfan I	20.72U
60-57-1	Dieldrin	41.44U
72-55-9	4,4'-DDE	41.44U
72-20-8	Endrin	41.44U
33213-65-9	Endosulfan II	41.44U
72-54-8	4,4'-DDD	41.44U
1031-07-8	Endosulfan Sulfate	41.44U
50-29-3	4,4'-DDT	41.44U
72-43-5	Methoxychlor	207.20U
53494-70-5	Endrin Ketone	41.44U
57-74-9	Chlordane	207.20U
8001-35-2	Toxaphene	414.40U
12674-11-2	Aroclor-1016	207.20U
11104-28-2	Aroclor-1221	207.20U
11141-16-5	Aroclor-1232	207.20U
53469-21-9	Aroclor-1242	207.20U
12672-29-6	Aroclor-1248	207.20U
11097-69-1	Aroclor-1254	414.40U
11096-82-5	Aroclor-1260	414.40U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) or W(s) 23.20 V(t) 40000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

3 144

Lab No: BK-531
Lab No: BK531
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction Scan Number	Estimated Concentration ug/kg
	UNKNOWN	BNA 478	800 J
	COLUMN BLEED	BNA 1706	200 J
	UNKNOWN HYDROCARBON	BNA 1934	500 J
	UNKNOWN HYDROCARBON	BNA 2133	800 J
	NO VOA COMPOUND FOUND		

Form I, Part B

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-531 DILUTION

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK531DL-
Sample Matrix: Soil
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7157
Date Sample Received: 07/09/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/16/87
Date Analyzed: 07/16/87
Conc/Dil Factor: 5 pH 6
Percent Moisture (Not Decanted): 22.7

CAS Number		ug/kg	CAS Number		ug/kg
74-87-3	Chloromethane	65U	78-87-5	1,2-Dichloropropane	32U
74-83-9	Bromomethane	65U	10061-02-6	Trans-1,3-Dichloropropene	32U
75-01-4	Vinyl Chloride	65U	79-01-6	Trichloroethene	32U
75-00-3	Chloroethane	65U	124-48-1	Dibromochloromethane	32U
75-09-2	Methylene Chloride	32U	79-00-5	1,1,2-Trichloroethane	32U
67-64-1	Acetone	65U	71-43-2	Benzene	32U
75-15-0	Carbon Disulfide	32U	10061-01-5	Cis-1,3-Dichloropropene	32U
75-35-4	1,1-Dichloroethene	32U	110-75-8	2-Chloroethylvinylether	65U
75-34-3	1,1-Dichloroethane	4 J	75-25-2	Bromoform	32U
156-60-5	Trans-1,2-Dichloroethene	32U	591-78-6	4-Methyl-2-Pentanone	65U
67-66-3	Chloroform	8 J	108-10-1	2-Hexanone	65U
107-06-2	1,2-Dichloroethane	32U	127-18-4	Tetrachloroethene	32U
78-93-3	2-Butanone	65U	79-34-5	1,1,2,2-Tetrachloroethane	32U
71-55-6	1,1,1-Trichloroethane	530	108-88-3	Toluene	32U
56-23-5	Carbon Tetrachloride	32U	108-90-7	Chlorobenzene	32U
108-05-4	Vinyl Acetate	65U	100-41-4	Ethylbenzene	32U
75-27-4	Bromodichloromethane	32U	100-42-5	Styrene	32U
				Total Xylenes	32U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-531 DILUTION
Lab No: BK531DL
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/kg
NO VOA COMPOUND FOUND				

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 714

Date 8/13/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7570

SOW NO. 7/85

Lab Receipt Date 7/11/87

LAB SAMPLE ID. NO. 87.07039-07

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	12300 *	P	13.	Magnesium	3630 *	P
2.	Antimony	6.7U N	TP	14.	Manganese	678	P
3.	Arsenic	12u *	F	15.	Mercury	0.7	A
4.	Barium	186	TP	16.	Nickel	23 J	P
5.	Beryllium	[0.3]	P	17.	Potassium	1010	A
6.	Cadmium	13 N	TP	18.	Selenium	1.2u	F
7.	Calcium	10300	P	19.	Silver	2.5u	F
8.	Chromium	19	P	20.	Sodium	194 u	P
9.	Cobalt	[9.9]	P	21.	Thallium	2.5u	F
10.	Copper	51	P	22.	Vanadium	24	P
11.	Iron	12400	P	23.	Zinc	240 E	P
12.	Lead	353	P		Precent Solids (%)	81.0	

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown, fine, medium; Sample diluted by 5X for As;

Lab Manager K A Finnell

NY 86-53

ORG. No. - BK532

INORG. No. - MBK 720

Case No. - 7570

SOUTHWEST RESEARCH INSTITUTE

Sample Number

BK-532

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: SwRI
Lab Sample No: BK532-
Sample Matrix: Soil
Data Release Authorized By:

Case No: 7570
QC Report No: 7570
Contract No: 68-01-7167
Date Sample Received: 07/03/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 07/16/87
Date Analyzed: 07/16/87
Conc/Dil Factor: 1 pH 7
Percent Moisture (Not Decanted): 17.6

CAS Number		ug/kg	CAS Number		ug/kg
74-87-3	Chloromethane	12U	78-87-5	1,2-Dichloropropane	6U
74-83-9	Bromomethane	12U	10061-02-6	Trans-1,3-Dichloropropene	6U
75-01-4	Vinyl Chloride	12U	79-01-6	Trichloroethene	6U
75-00-3	Chloroethane	12U	124-48-1	Dibromochloromethane	6U
75-09-2	Methylene Chloride	~~4~~	79-00-5	1,1,2-Trichloroethane	6U
67-64-1	Acetone	~~94~~ B	71-43-2	Benzene	6U
75-15-0	Carbon Disulfide	6U	10061-01-5	Cis-1,3-Dichloropropene	6U
75-35-4	1,1-Dichloroethene	6U	110-75-8	2-Chloroethylvinylether	12U
75-34-3	1,1-Dichloroethane	6U	75-25-2	Bromoform	6U
156-60-5	Trans-1,2-Dichloroethene	6U	591-78-6	4-Methyl-2-Pentanone	12U
67-66-3	Chloroform	6U	108-10-1	2-Hexanone	12U
107-06-2	1,2-Dichloroethane	6U	127-18-4	Tetrachloroethene	6U
78-93-3	2-Butanone	12U	79-34-5	1,1,2,2-Tetrachloroethane	6U
71-55-6	1,1,1-Trichloroethane	6U	108-88-3	Toluene	6U
56-23-5	Carbon Tetrachloride	6U	108-90-7	Chlorobenzene	6U
108-05-4	Vinyl Acetate	12U	100-41-4	Ethylbenzene	6U
75-27-4	Bromodichloromethane	6U	100-42-5	Styrene	6U
				Total Xylenes	6U

Data Reporting Qualifiers

Values If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analysed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action(This is not necessarily the instrument detection limit). The footnote should be read U compound was analyzed for but not detected. The number is the minimum attainable limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than specified detection limit but greater than zero (e.g. 10J), or the compound is saturated. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >=10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable method blank contamination and warns the data user to take appropriate action.

S spiked compounds

Form I

SOUTHWEST RESEARCH INSTITUTE

Sample No: BK-532
Lab No: BK532
Case No: 7570

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

GPC Cleanup YES

Concentration: Low
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/22/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

CAS Number		ug/kg
108-95-2	Phenol	8020
111-44-4	bis(2-Chloroethyl)Ether	8020
95-57-8	2-Chlorophenol	8020
541-73-1	1,3-Dichlorobenzene	8020
106-46-7	1,4-Dichlorobenzene	8020
100-51-6	Benzyl Alcohol	8020
95-50-1	1,2-Dichlorobenzene	8020
95-48-7	2-Methylphenol	8020
39638-32-9	bis(2-Chloroisopropyl)Ether	8020
106-44-5	4-Methylphenol	8020
621-64-7	N-Nitroso-Di-n-Propylamine	8020
67-72-1	Hexachloroethane	8020
98-95-3	Nitrobenzene	8020
78-59-1	Isophorone	8020
88-75-5	2-Nitrophenol	8020
105-67-9	2,4-Dimethylphenol	8020
65-85-0	Benzoic Acid	38880
111-91-1	bis(2-Chloroethoxy)Methane	8020
120-83-2	2,4-Dichlorophenol	8020
120-82-1	1,2,4-Trichlorobenzene	8020
91-20-3	Naphthalene	8020
106-47-8	4-Chloroaniline	8020
87-68-3	Hexachlorobutadiene	8020
59-50-7	4-Chloro-3-Methylphenol	8020
91-57-6	2-Methylnaphthalene	8020
77-47-4	Hexachlorocyclopentadiene	8020
88-06-2	2,4,6-Trichlorophenol	8020
95-95-4	2,4,5-Trichlorophenol	38880
91-58-7	2-Chloronaphthalene	8020
88-74-4	2-Nitroaniline	38880
131-11-3	Dimethyl Phthalate	8020
208-96-8	Acenaphthylene	8020
99-09-2	3-Nitroaniline	38880

CAS Number		ug/kg
83-32-9	Acenaphthene	8020
51-28-5	2,4-Dinitrophenol	38880
100-02-7	4-Nitrophenol	38880
132-64-9	Dibenzofuran	8020
121-14-2	2,4-Dinitrotoluene	8020
606-20-2	2,6-Dinitrotoluene	8020
84-66-2	Diethylphthalate	8020
7005-72-3	4-Chlorophenylphenylether	8020
86-73-7	Fluorene	8020
100-01-6	4-Nitroaniline	38880
534-52-1	4,6-Dinitro-2-Methylphenol	38880
86-30-6	N-Nitrosodiphenylamine(1)	8020
101-55-3	4-Bromophenylphenylether	8020
118-74-1	Hexachlorobenzene	8020
87-86-5	Pentachlorophenol	38880
85-01-8	Phenanthrene	250 J
120-12-7	Anthracene	8020
84-74-2	Di-n-Butylphthalate	[illegible] B
206-44-0	Fluoranthene	620 J
129-00-0	Pyrene	530 J
85-68-7	Butylbenzylphthalate	8020
91-94-1	3,3'-Dichlorobenzidine	16040
56-55-3	Benzo(a)Anthracene	260 J
117-81-7	bis(2-Ethylhexyl)Phthalate	8020
218-01-9	Chrysene	330 J
117-84-0	Di-n-Octyl Phthalate	8020
205-99-2	Benzo(b)Fluoranthene	440 J
207-08-9	Benzo(k)Fluoranthene	8020
50-32-8	Benzo(a)Pyrene	8020
193-39-5	Indeno(1,2,3-cd)Pyrene	8020
53-70-3	Dibenz(a,h)Anthracene	8020
191-24-2	Benzo(g,h,i)Perylene	8020

(1) - Cannot be separated from diphenylamine

SOUTHWEST RESEARCH INSTITUTE

3 211

Sample No: BK-532
Lab No: BK532
Case No: 7570

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low GPC Cleanup YES
Date Extracted/Prepared: 07/13/87
Date Analyzed: 07/31/87
Conc/Dil Factor: 2.00
Percent Moisture (Decanted): NA

CAS Number		ug/kg
319-84-6	Alpha-BHC	19.44U
319-85-7	Beta-BHC	19.44U
319-86-8	Delta-BHC	19.44U
58-89-9	Gamma-BHC (Lindane)	19.44U
76-44-8	Heptachlor	19.44U
309-00-2	Aldrin	19.44U
1024-57-3	Heptachlor Epoxide	19.44U
959-98-8	Endosulfan I	19.44U
60-57-1	Dieldrin	38.88U
72-55-9	4,4'-DDE	38.88U
72-20-8	Endrin	38.88U
33213-65-9	Endosulfan II	38.88U
72-54-8	4,4'-DDD	38.88U
1031-07-8	Endosulfan Sulfate	38.88U
50-29-3	4,4'-DDT	38.88U
72-43-5	Methoxychlor	194.40U
53494-70-5	Endrin Ketone	38.88U
57-74-9	Chlordane	194.40U
8001-35-2	Toxaphene	388.80U
12674-11-2	Aroclor-1016	194.40U
11104-28-2	Aroclor-1221	194.40U
11141-16-5	Aroclor-1232	194.40U
53469-21-9	Aroclor-1242	194.40U
12672-29-6	Aroclor-1248	194.40U
11097-69-1	Aroclor-1254	388.80U
11096-82-5	Aroclor-1260	388.80U

V(i) = Volume of extract injected (ul)
V(s) = Volume of water extracted (ml)
W(S) = Weight of sample extracted (g)
V(t) = Volume of total extract (ul)

V(s) or W(s) 24.72 V(t) 40000 V(i) 5

Form I

SOUTHWEST RESEARCH INSTITUTE

3 212

Sample No: BK-532
Lab No: BK532
Case No: 7570

Organics Analysis Data Sheet
(Page 4)
Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration ug/kg
	UNKNOWN	BNA	477	700 J
	UNKNOWN AROMATIC	BNA	949	500 J
	UNKNOWN AROMATIC	BNA	1427	900 J
	UNKNOWN	BNA	1747	300 J
	UNKNOWN	BNA	1803	800 J
	UNKNOWN	BNA	1863	600 J
	UNKNOWN	BNA	1960	400 J
	UNKNOWN HYDROCARBON	BNA	2037	500 J
	UNKNOWN HYDROCARBON	BNA	2132	200 J
	NO VOA COMPOUND FOUND			

Form I, Part B

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MBK 220

Date 8/13/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME PBS&J

CASE NO. 7510

SOW NO. 7/85

Lab Receipt Date 7/28/87

LAB SAMPLE ID. NO. 8707042-03

QC REPORT NO. 1

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water ____ Soil X Sludge ____ Other ____

ug/L or mg/kg dry weight (Circle One)

1.	Aluminum	947 *	P	13.	Magnesium	5550 *	P
2.	Antimony	6.50 N	J P	14.	Manganese	718	P
3.	~~Arsenic~~	~~9.6 M *~~	~~E~~	15.	Mercury	0.1	A
4.	Barium	106	J P	16.	Nickel	26	J P
5.	Beryllium	0.33	P	17.	Potassium	[682]	A
6.	Cadmium	10 N	J P	18.	Selenium	1.0 u *	F
7.	Calcium	10000	P	19.	Silver	2.4 u	F
8.	Chromium	19	P	20.	Sodium	189 u	P
9.	Cobalt	[9.7]	P	21.	Thallium	2.4 u	F
10.	Copper	28	P	22.	Vanadium	24	P
11.	Iron	10800	P	23.	Zinc	540 E	P
12.	Lead	14	P		Precent Solids (%)	83.0	

Cyanide NR

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Brown fine-medium

Lab Manager [illegible]

Reference 10

Water Resources Data
New York
Water Year 1993

Volume 3. Western New York

GEOLOGICAL SURVEY WATER-DATA REPORT NY-93-3

01509000 TIOUGHNIOGA RIVER AT CORTLAND, NY

LOCATION.--Lat 42°36'10", long 76°09'35", Cortland County, Hydrologic Unit 02050102, on right bank at east end of Elm Street at Cortland, 0.4 mi downstream from confluence of East and West Branches. Water-quality sampling site at Cortland Sewage Treatment Plant, 0.4 mi downstream from discharge station.

DRAINAGE AREA.--292 mi^2, including 14.0 mi^2, the flow from which may be diverted into De Ruyter Reservoir in Oswego River basin.

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WSP 2103: Drainage area. WRD NY 1974: 1973.

GAGE.--Water-stage recorder. Datum of gage is 1,084.92 ft above sea level. Prior to Oct. 1, 1939, water-stage recorder at datum 4.00 ft higher; Oct. 1, 1939 to Sept. 30, 1963, water-stage recorder at datum 3.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges (ice effect), which are fair. Diurnal fluctuation at low and medium flow caused by powerplants in mills on West Branch. Slight diversion from East Branch for operation of Erie (Barge) Canal. Slight diversion from Gate House Pond on West Branch 17 mi upstream from station into Onondaga Creek basin (St. Lawrence River basin) for manufacturing purposes by Linden Chlorine Process Co. Telephone and satellite gage-height telemeters at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Apr. 1	2130	6,400	9.86	Apr. 11	1000	*10,400	*12.25
Apr. 17	1630	5,050	8.90				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	445	493	780	2210	e380	e170	5920	1200	418	183	92	75
2	411	524	704	1480	e350	e170	6090	1020	337	180	93	84
3	379	988	652	1140	e320	e180	5020	889	288	217	99	136
4	357	892	599	1240	e350	e170	3270	779	257	196	98	226
5	331	786	580	1760	e360	e160	2270	906	278	163	92	158
6	319	861	518	1610	e310	e150	2290	1130	590	151	87	116
7	304	795	514	1230	e290	e150	2430	893	456	142	87	105
8	293	658	490	e1000	e270	e160	2590	750	360	129	91	99
9	294	596	e410	e760	e260	e170	2920	669	355	128	90	94
10	480	569	e410	e640	e250	e170	4970	608	346	124	85	90
11	412	668	425	e600	e250	e160	9490	561	314	123	83	90
12	430	830	432	e620	e240	e150	5300	524	286	120	83	95
13	386	941	427	e740	e230	e130	3170	460	256	121	83	86
14	354	831	e390	919	e230	e100	2310	441	230	113	82	82
15	342	725	e380	725	e230	e140	1920	430	238	110	80	80
16	364	651	394	649	e230	e190	2760	443	315	107	79	80
17	397	613	581	602	e220	e180	4590	408	224	104	83	80
18	368	592	1010	e520	e220	e190	4000	381	199	99	80	78
19	388	556	789	e460	e210	e190	2600	377	190	106	80	78
20	414	509	919	e440	e200	e200	1910	381	215	112	83	77
21	407	534	955	e420	e220	e210	2760	362	306	111	92	76
22	455	781	771	e500	e210	e200	3390	343	525	101	88	76
23	425	2040	e590	573	e200	e200	2920	330	368	94	85	75
24	490	2140	e540	546	e200	e270	3050	322	302	91	84	76
25	898	1940	e500	e640	e190	e340	3600	318	264	88	86	78
26	771	1670	e470	e530	e190	e400	4240	304	225	86	85	86
27	714	1330	e430	e480	e180	e500	3380	290	215	84	81	87
28	624	1090	e400	e440	e170	835	2280	277	236	84	78	112
29	575	952	e450	e410	---	2030	1750	252	272	82	76	108
30	614	863	e1000	e400	---	4020	1430	234	221	84	77	98
31	540	---	2330	e380	---	5390	---	268	---	88	76	---
TOTAL	13981	27418	19840	24664	6960	17675	104620	16550	9086	3721	2638	2881
MEAN	451	914	640	796	249	570	3487	534	303	120	85.1	96.0
MAX	898	2140	2330	2210	380	5390	9490	1200	590	217	99	226
MIN	293	493	380	380	170	100	1430	234	190	82	76	75
CFSM	1.54	3.13	2.19	2.72	.85	1.95	11.9	1.83	1.04	.41	.29	.33
IN.	1.78	3.49	2.53	3.14	.89	2.25	13.33	2.11	1.16	.47	.34	.37

e Estimated

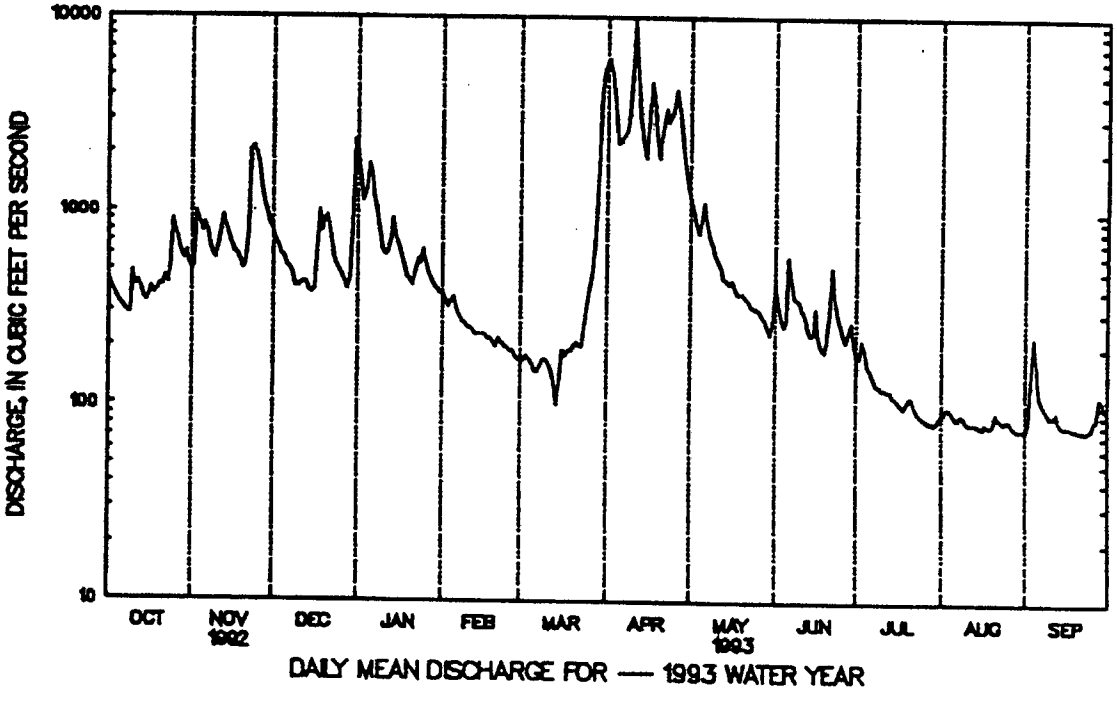
01509000 TIOUGHNIOGA RIVER AT CORTLAND, NY--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

MEAN	259	425	570	500	554	1060	1260	575	330	178	126	156
MAX	1553	1119	1307	1038	1469	2432	3487	1352	1674	539	480	1125
(WY)	1978	1969	1973	1979	1976	1945	1993	1943	1972	1976	1992	1977
MIN	33.2	44.3	86.7	112	127	359	305	212	88.7	43.5	34.6	23.8
(WY)	1965	1965	1961	1961	1963	1941	1946	1985	1939	1962	1939	1939

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1938 - 1993	
ANNUAL TOTAL	220584		250034			
ANNUAL MEAN	603		685		498	
HIGHEST ANNUAL MEAN					723	1943
LOWEST ANNUAL MEAN					303	1965
HIGHEST DAILY MEAN	3230	Mar 28	9490	Apr 11	11500	Mar 6 1979
LOWEST DAILY MEAN	82	Jul 3	75	a	17	b
ANNUAL SEVEN-DAY MINIMUM	98	Jun 28	77	Sep 18	21	Sep 19 1939
INSTANTANEOUS PEAK FLOW			10400	Apr 11	13000	Mar 5 1964
INSTANTANEOUS PEAK STAGE			12.25	Apr 11	13.82	Apr 5 1950
INSTANTANEOUS LOW FLOW			73	c	9.8	Sep 20 1939
ANNUAL RUNOFF (CFSM)	2.06		2.35		1.71	
ANNUAL RUNOFF (INCHES)	28.10		31.85		23.18	
10 PERCENT EXCEEDS	1130		1820		1110	
50 PERCENT EXCEEDS	481		354		282	
90 PERCENT EXCEEDS	205		85		68	

a Sep 1, 23.
b Sept. 26, 27, 1959.
c Sep 22, 23, 27.



Reference 11

FISH STOCKING LIST

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION

REGION 7

Fish Distribution January 1 - December 31, 1994
Planted in cooperation with County Federated Sportsmen

CODE: ST-Brook Trout; BT-Brown Trout; RT-Rainbow Trout; TGRM-Tiger Muskellunge; CHIN-Chinook Salmon; LLS-Landlocked Salmon; WP-Walleye Pike; COHO-Coho Salmon; STHD-Rainbow Trout Steelhead Strain Rainbow Trout

WATER (TOWNSHIP)	NUMBER	SPECIES	SIZE
BROOME COUNTY			
Artic Lake (Sanford)	2,300	RT	8.00
Chenango Lake (Fenton)	2,750	RT	9.00
" " "	7,480	RT	8.00
Dudley Creek (Lisle) (Richfield in Tioga)	190	BT	7.50
Finch Hollow - Site 15 (Union)	920	RT	8.00
Greenwood Lake	1,840	RT	9.50
Little Coconut Creek	190	RT	8.00
Nanticoke Creek (Maine, Nanticoke)	250	BT	8.50
" " " "	1,900	BT	7.50
Nanticoke Lake (Lisle)	2,120	RT	8.50
" " "	560	RT	8.00
Oquaga Creek (Sanford)	2,160	BT	7.50
" " - Trib 6 (Sanford)	850	BT	7.50
Palmers Pond	190	RT	8.00
Patterson Pond	740	RT	8.00
Susquehanna River	2,400	TGRM	8.50
Whitney Point Reservoir (Triangle)	3,800	TGRM	9.00
CAYUGA COUNTY			
Duck Pond	700	TGRM	9.00
Fall Creek (Summer Hill)	960	ST	8.50
" " " "	2,000	ST	4.00
Lake Como	200	TGRM	9.00
Lake Ontario (Fair Haven)	13,160	BT	8.50
" " " "	17,500	BT	7.00
" " (Little Sodus Bay)	15,000	WP	2.00
North Brook (Throop)	670	BT	7.50
Otter Lake	1,300,000	WP	Fry
Owasco Inlet, Tr. 17-49 (Moravia, Locke, Groton)	3,100	BT	7.50
" " " "	20,000	RT	3.00

WATER (TOWNSHIP)	NUMBER	SPECIES	SIZE
CAYUGA COUNTY (CONT'D)			
Owasco Lake	5,000	BT	9.50
" "	3,940	BT	7.00
" "	364	LLS	24.50
" "	8,660	LLS	8.50
" "	4,833	LLS	7.00
" "	10,500	LT	5.50
" "	2,470	RT	7.00
" "	5,000	RT	5.50
Salmon Creek (Venice, Genoa)	2,080	BT	8.00
Sterling Creek	6,980	STHD	5.50
" "	66,670	CHIN	3.00
Sterling Valley Creek	6,980	STHD	5.50
CHENANGO COUNTY			
Balsam Pond (Pharsalia)	900	TGRM	9.00
Bear Brook (Oxford)	1,100	BT	4.50
Bowman Creek (Smithville)	940	BT	8.00
Bowman Lake (McDonough)	670	ST	9.00
" " "	550	RT	8.50
" " "	5,000	RT	4.00
Chenango Lake (New Berlin)	450	TGRM	9.00
Cook's Pond (Greene)	70	TGRM	9.00
Fly Meadow Creek (Preston)	3,000	ST	4.50
Genegantslet Creek (Pharsalia, Green, Smithville)	2,820	BT	8.00
Guilford Lake (Guilford)	1,690	BT	9.00
Handsome Brook (Sherburne)	470	BT	9.00
Jeffrey Pond (No. Norwich)	1,060	ST	9.00
Long Pond	350	TGRM	9.00
Mill Brook	800	BT	4.50
Mill Brook Reservoir	2,760	RT	8.50
Otsego-Chenango-Broome BOCES	12,000	WP	Fry
Otselic River (Pitcher)	11,650	BT	8.00
Pharsalia Y Camp Pond	100	ST	9.00
Tannery Brook (Pitcher, Lincklaen)	2,000	ST	4.50
CORTLAND COUNTY			
Casterline Pond	540	RT	
" "	940	BT	7.50
Gridley Creek (Virgil)	2,000	ST	4.50
Little York Lake (Little York)	4,600	RT	8.50
" " " " "	940	BT	7.50
Merrill Creek (Marathon, Freetown)	750	BT	7.50
Otselic River (Taylor, Cincinnatus)	4,040	BT	7.50

WATER (TOWNSHIP)	NUMBER	SPECIES	SIZE
CORTLAND COUNTY (CONT'D)			
Tioghnioga River, East Branch (Cortlandville, Homer, Truxton)	8,840	BT	7.50
" " , West Branch (Homer, Preble)	6,550	BT	7.50
MADISON COUNTY			
Beaver Creek (Brookfield, Columbus)	3,500	BT	8.00
Canaseraga Creek (Sullivan)	1,500	BT	8.00
" " "	2,000	ST	4.50
Canastota Creek (Lenox, Lincoln)	650	BT	8.00
Canastota Reservoir (Lincoln)	180	RT	8.50
Chenango River (Eaton, Lebanon)	11,750	BT	8.00
Chittenango Creek (Cazenovia, Sullivan)	14,400	BT	8.00
Cowaselon Creek (Lenox, Lincoln)	3,760	BT	8.00
DeRuyter Reservoir (DeRuyter)	2,880,000	WP	Fry
Eaton Brook Reservoir	1,840	RT	8.00
" " "	5,080	WP	5.00
" " "	5,080	WP	2.00
" " "	1,270,000	WP	Fry
Fenner Club Pond (Fenner)	400	ST	7.50
Lake Ontario Tribs	28,000	LLS	1.50
Lebanon Reservoir (Lebanon)	837	RT	9.00
" " "	1,840	RT	8.00
Leland Pond	150	TGRM	9.00
" "	2,800	RT	7.00
Madison Reservoir	750	TGRM	9.00
Old Chenango Canal (Madison)	1,130	BT	8.00
Oneida Creek (Oneida, Stockbridge, Smithfield)	2,960	BT	8.00
Otselic River (Georgetown)	1,690	BT	8.00
Payne Brook (Hamilton)	900	BT	8.00
Sangerfield River (Hamilton)	4,140	BT	8.00
Stone Mill Creek	1,320	BT	8.00
Tanglewood Pond (Sullivan)	100	BT	8.00
Tioughnioga River, East Branch of East Branch (Cuyler, DeRuyter)	560	BT	8.00
Upper Leland Pond	1,600	BT	8.00

Reference 12

Jeff Martin

NYS DEC Region 7
Oil & Hazardous Material Spill - Fact Sheet
04/29/95

Spill Name: RUBBERMAID - CHLORETHANE
Spill No: 8606796

Spill Time: 1355
Spill Date: 02/05/87

Central Office Date: 02/05/87
Central Office Time: 1415

Answering Service Date: / /
Answering Service Time: 0

Regional Office Date: 02/05/87
Regional Office Time: 1410

Material Class: Hazardous material
Petroleum Spilled: No Data Entered
Other Material: CHLORETHANE

Quantity Spilled: 40.00 G
Quantity Recovered: 0.00 G
Spill Cause: Equipment failure

Spiller: RUBBERMAID
Street: CENTRAL AVE.
City, State, Zip: CORTLAND
Telephone: 607-753-3305

Spill Source: Commercial est. (no petro for sale)
Spill Location: CENTRAL AVENUE
Municipality: CORTLAND
County: CORTLAND SWIS Code: 11

Waterbody:
Notifier: Responsible entity/spiller

Resources Affected: On land
Drainage Basin: 0

Remarks:
DRUM RUPTURED DURING TRANSPORTING.

Caller:
Affiliation:
Telephone:

Pin Number: 0
Status: C
Cleaner: Spiller

T/A: 0
Cost Center Code (St.):
Clean Date: 08/11/87

Date I.S.R. sent to C.O.: / /

UST Trust Eligible?: No
Cost Center Code (Fed):

PBS Number: 0
Tank ID Numbers:

Close Date: 08/11/87

Investigator:
Last Update: 03/05/87

SPILL RESPONSE FORM

SPILL DATE: 2/5/87 TIME: 1:55 hrs. REGION 7 SPILL NO. 86 6796
CENT OFF DATE: 2/5/87 TIME: 2:15 hrs. ANS SVC DATE: / / TIME: hrs.
REG OFF DATE: 2/5/87 TIME: 2:10 FIRST CALL: A, (R) C

Petroleum Spilled

1 - Gasoline
2 - #2 Fuel
3 - #4 Fuel
4 - #6 Fuel
5 - Diesel
6 - Jet Fuel
7 - Waste Oil
8 - Non-PCB Oil
9 - PCB Oil
10 - Unknown

Material Class

1 - Petroleum
2 - NonPetro/NonHaz
(3) - Hazardous Material
4 - Raw Sewage
5 - Unknown

Other Material Spilled: Chloromethane QUANTITY SPILLED: 30-40 (gals, lbs)

SPILL LOCATION

ADDRESS: Central Ave
MUNICIPALITY: Cortland
COUNTY: Cortland

SPILLER NAME: Rubbermaid
STREET: Central Ave
CITY/ST/ZIP: Cortland NY 13045
PHONE: 607 753 3305

Spill Cause

1 - Human Error
2 - Traffic Accident
(3) - Equip. Failure
4 - Vandalism
5 - TK Test Fail. (Bulk Stor. Pro.)
6 - Housekeeping
7 - Deliberate
8 - Aband. Drums
9 - Tank Failure
10 - Tank Overfill
11 - Other
12 - Unknown

Spill Source

(1) - Comm./Indust.
2 - Non Comm/Inst.
3 - Major Facility
4 - Bulk Facility
5 - Gas Station
6 - Pass. Vehicle
7 - Comm. Vehicle
8 - Tank Truck
9 - Pvt. Dwelling
10 - Vessel
11 - Railroad Car
12 - Unknown

Resource Affected

(1) On Land
2 - In Sewer
3 - Groundwater
4 - Surface Water
5 - Air

Waterbody
Drain Basin/Sub Basin

Notifier:

1 - Resp. Party
2 - Affect. Pers.
3 - Police Dept.
4 - Fire Dept.
5 - Tank Tester
6 - DEC
7 - Citizen
8 - Health Dept.
9 - Local Agency
10 - Fed. Gov't.
11 - Other (see remarks)

REMARKS: Drum ruptured durring X-Port

ACTION/HISTORY: Spill closed. Cleanup complete

CALLER'S NAME: Bill Agrusta
CALLER'S AGENCY: Rubbermaid
CALLER'S PHONE: 607-753-3305

NOTIFIER'S NAME:
NOTIFIER'S AGENCY:
NOTIFIER'S PHONE:

CCHD

REGIONAL/CENT OFF NOTIFICATION

PERSON CONTACTED: CSC
CALLER
ANS SVC OPER
DUTY OFFICER

5/87

4:15 arrive on site. Laborers 'spedi-dry' into drums. Ordered removal of contaminated soil: snow. ± 37 gal spilled, 18 gal in drums. Left site 8:15 PM. Bill Lewis in charge

2/6

8:00 arrive site. Supervised soil removal used "sniff test" to determine extent of contamination.

2/7.

Met w/ CECOS Rep Lisa on site to discuss removal of debris. Consider spill closed. Rubbermaid will test soil below excavation for TCE to confirm cleanliness 8 55 gal drums of debris removed.

Reference 13

BROCKWAY MOTOR TRUCKS
FACTORY & GENERAL OFFICE
108 CENTRAL AVENUE
CORTLAND, N.Y. 13045

June 20, 1972

Mr. Ralph K. Pitman
Asst. Superintendent of Solid Waste Div.
Department of Highways Cortland County
Traction Drive
Cortland, New York 13045

Dear Mr. Pitman:

This will acknowledge receipt of your letter dated June 12, 1972 regarding disposal of Special Wastes. The only materials of a special nature that we generate are "junk", paint thinner (approximately 100 gals. per week) and paint rags.

We have been unable to acquire any source to specifically remove this type of waste.

If you have any alternative measures to dispose of this material, kindly advise us.

Very truly yours,

Leo P. Mahar
Traffic Manager

ph

Reference 14

VILLAGE OF HOMER
CITY OF CORTLAND
TOWN OF CORTLANDVILLE
VILLAGE OF McGRAW
Homer
CORTLAND
Cortlandville
Pukeville
South Cortland
Blodgett Mills
Hicks Hill
Carr Hill
East Hill
Central High Sch
Cortland Country Club
Camp Tioughnioga
Muni-Con Airport
Hutchinson Corners
Sewage Disposal
TOUGHNIOGA RIVER
Trout Brook
East River
Tioughnioga
Cosmos Hill
Blue Creek
Dry Creek
Lehigh Valley RR
Erie RR
Fairgrounds
Fairgrounds Ave
Groton Ave
Watson Ave
Valley Road
Lehigh Valley Road
Foster-Mixer Road
Cortlandville Rd
Cortland Rd
Homer Rd
Tompkins Hill Road
Tompkins Hill
Dry Hill
Sta Sauna
Edgewood Cemetery
Tuttle Hill
Tuttle Hill Sch
Hubbard Mill
Cortland Cemetery
Cortland Sewage Disposal
Cortland Country Club
Cortland Country Club
Cortland Country Club