EPA WORK ASSIGNMENT NO: 076-2JZZ
EPA CONTRACT NO: 68-W8-0110
EBASCO SERVICES INCORPORATED
ARCS II PROGRAM

DRAFT
EXPANDED SITE INSPECTION REPORT (ESI)
DAYTON T. BROWN SITE
BOHEMIA
SUFFOLK COUNTY, NEW YORK
CERCLIS NO.: NY002050177

JANUARY 1996

VOLUME I OF III

NOTICE

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EBASCO

January 23, 1996
ARCS II-96-076-0008

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

SUBJECT: ARCS II PROGRAM - EPA CONTRACT NO. 68-W8-0110
WORK ASSIGNMENT 076-2JZZ
DRAFT EXPANDED SITE INSPECTION (ESI) REPORT
DAYTON T. BROWN SITE

Dear Ms. Moyik:

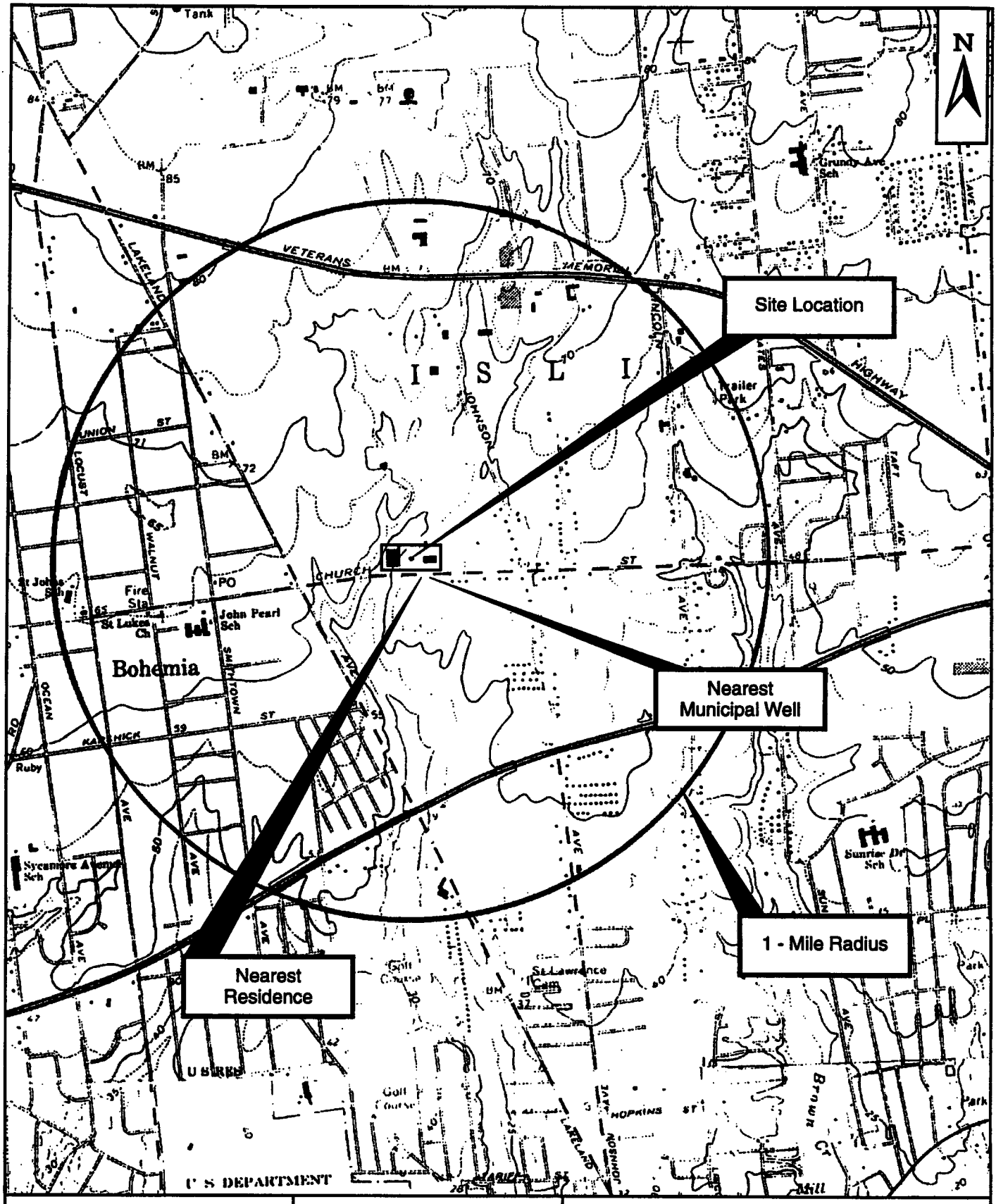
The following is a draft summary of the Expanded Site Inspection (ESI) evaluation of the Dayton T. Brown site, CERCLIS No. NY002050177, located on Church Street, in Bohemia, Suffolk County, New York.

General Description and Site History

The Dayton T. Brown (DTB) site is located on the north side of Church Street between Orville Drive and Johnson Avenue, in the village of Bohemia, Suffolk County, New York (Lat: 40° 46'16.30"; Long: 73° 05'56.0") (Ref. 3, p. 1 of 1; Ref. 4 p. 8 of 20). Dayton T. Brown Inc. provides environmental and electronics testing services, and prepares publications and technical manuals, including illustrations, for both military and commercial markets (Ref. 5, p. 2 of 2; Ref. 6, p. 2 of 2). DTB also custom manufactures metal chasis, frames, doors, and cabinets for use in medical, computer and office products (Ref. 5, p. 2 of 2).

The area surrounding the DTB site is zoned as commercial, industrial, and residential communities (Ref. 7, p. 4 of 37). The site borders an industrial park to the north, residential communities to the south, commercial properties to the west and a precast cement plant to the east (Ref. 4, p. 8 of 20, Ref. 8, p. 3 of 17). There is also a Suffolk County Water Authority (SCWA) wellfield located 0.08 mile east of the site on Church Street which contained trace amounts of volatile organics not attributable to the DTB site (Ref. 4, pp. 8, 9, 15 of 20; Ref. 42, p. 1 of 1). Figure 1 depicts the regional location of the site and Figure 2 provides a detailed site sketch.

The DTB facility, in operation since 1958, is divided into two divisions: manufacturing, and industrial research and development (Ref. 9, p. 1 of 39).



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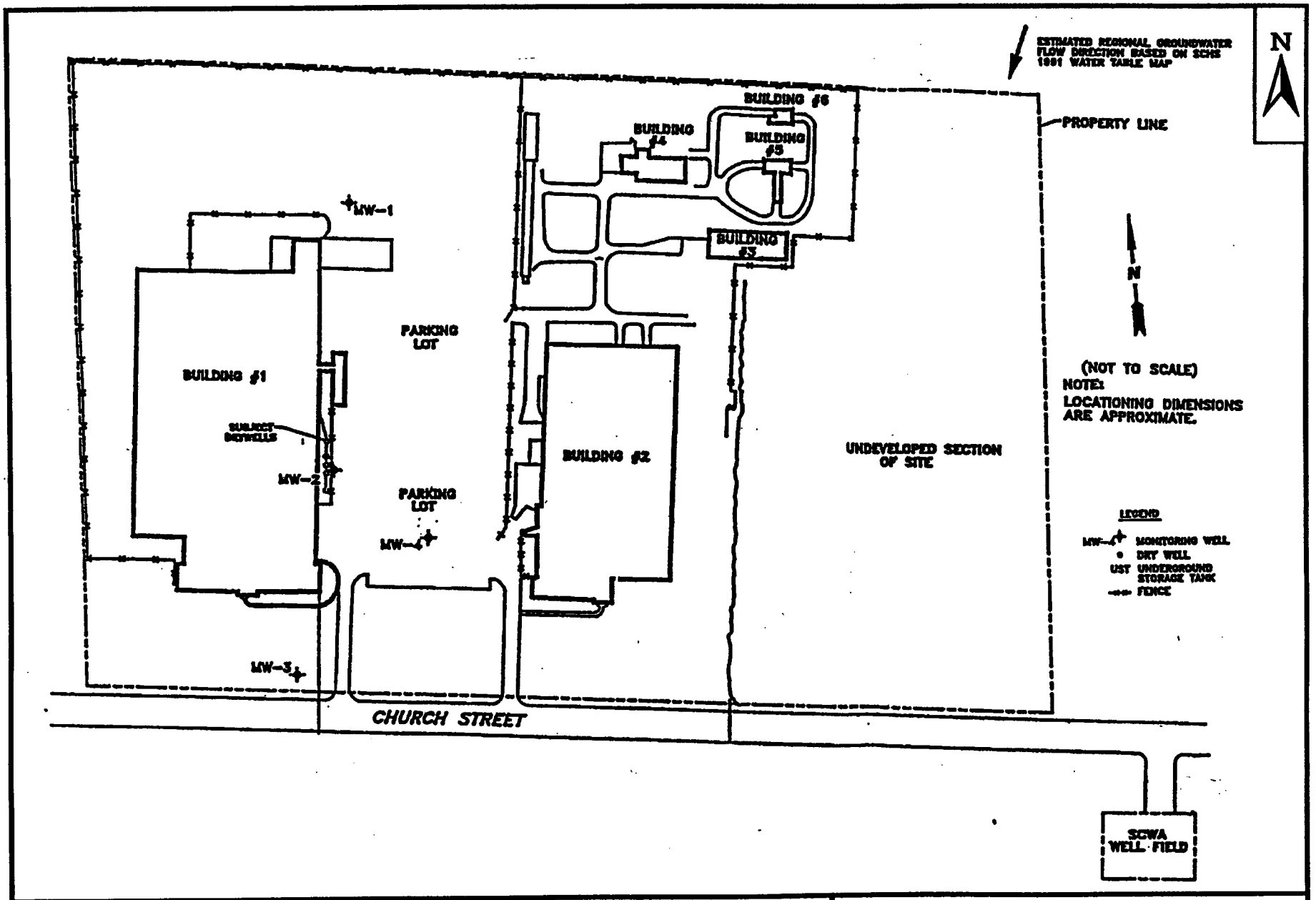
U.S.G.S Topographic Map
7.5 Minute Series
Quadrangle Patchogue, NY 1967

FIGURE 1
SITE LOCATION MAP

DAYTON T. BROWN SITE
BOHEMIA, SUFFOLK COUNTY, NY



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SOURCE:
Groundwater Technology, Inc.
August 10, 1992

NOT TO SCALE

Figure 2
SITE SKETCH AND
MONITORING WELL LOCATION MAP

DAYTON T. BROWN SITE
BOHEMIA, NY

The property is 26.8 acres in size with approximately 5 acres of undeveloped land and consists of 6 buildings (Ref. 10, p. 1 of 1). The west building, building #1, is the Manufacturing Division (Ref. 11, p. 3 of 4). It houses raw material and waste storage areas, a paint shop, a plating area, sheet metal forming equipment, and administrative offices (Ref. 11, p. 3 of 4). The east building, building #2, is known as the Engineering and Test Division, which houses various testing and test stand fabrication areas, a photo processing lab, engineering, and several administrative and executive offices (Ref. 11, p. 3 of 4). Building #3 is a large metal quonset hut type building, also known as the wonder builder, which serves as general storage for the raw materials, and acids and oils used in the Engineering and Test Division (Ref. 11, p. 3 of 4). Building #4, or the Remote Facility, houses armament testing facilities (Ref. 11, p. 3 of 4).

Buildings #5 and #6 are known as FCC field testing facilities and equipment storage, respectively (Ref. 11, p. 4 of 4; Ref. 12, p. 1 of 3). DTB is inspected yearly and bi-yearly by both the Suffolk County Department of Health Services (SCDHS) and the New York State Department of Environmental Conservation (NYSDEC) (Ref. 67, p. 1 of 1). Samples are regularly collected and analyzed according to permit limitations (Ref. 67, p. 1 of 1). The recharge basin located on the east side of the Engineering and Test Division has a valid State Pollutant Discharge Elimination System (SPDES) permit until February 1997 (Ref. 16, P. 1 of 3). However, in 1995 DTB incorporated a digital photo process into their system which eliminated any tertiary discharge to the recharge basin (Ref. 12, p. 2 of 3). DTB's permitted storage facilities have a total capacity of 240 drums (13,200 gallons) and contain waste oil (750-1000 gal/yr); plating wastewater (4000-7000 gal/yr); plating sludge (50-200 gal/yr); etching acid (100-400 gal/yr); paint thinner (200-500 gal/yr); and paint (100-500 gal/yr) (Ref. 12, pp. 2, 3 of 3). The facility no longer discharges process wastes. All wastes generated are stored in drums and are disposed of in accordance with state, local and federal guidelines (Ref. 12, p. 2 of 3). The plating process formerly discharged cyanide zinc plating wastes into the industrial leaching pools. Currently the process is an ammonia zinc chloride or aluminum etch and irridite process (Ref. 12, p. 2 of 3). The wastewaters and suspended solids from these systems are removed from process tanks and disposed of off site (Ref. 12, p. 2 of 3). The remaining sludge is placed in 55-gallon drums for disposal (Ref. 12, p. 2 of 3). Historical information concerning the DTB site prior to 1958 was not available except that Mr. J.M. Green of Great River owned the property (Ref. 9, p. 10 of 39). In 1958, Dayton T. Brown purchased the vacant land, constructed building #1 and began operation in 1966 (Ref. 13, p. 1 of 3).

The USEPA conducted a preliminary assessment at the DTB site in October 1986. A medium priority was given to the site due to concentrations of silver, lead, copper, trichloroethylene, 1,1,1-trichloroethane, and tetrachloroethene in the recharge sump's photo processing rinse water (Ref. 14, p. 1 of 2). Another concern of the assessment were the five leaching pools or drywells which were connected to the interior plating operation discharge collection system (Ref. 15, p. 1 of 1). These leaching pools had been mistakenly registered as underground steel storage tanks (Ref. 15, p. 1 of 1).

In August 1987, NUS Corporation conducted a site inspection. NUS identified two areas of concern, the five leaching pools and the recharge basin (Ref. 7, p. 4 of 37). The pools contained plating waste prior to off-site disposal; however, their condition was unknown. The recharge basin received photo waste and process cooling water (Ref. 7, p. 4 of 37). The recharge basin was

SPDES permitted; however, in the past DTB had violated the permit's limits and parameters (Ref. 7, p. 4 of 37; Ref. 16, pp. 1 through 3 of 3).

One groundwater, one effluent, two soil, two sediment and two sludge samples were collected by NUS during the site inspection. Analysis of the samples indicated the presence of several organics and heavy metals in both the soil and sludge samples. However, no soil background samples were collected. The sludge samples taken from the holding tanks contained the following: calcium (94.2 - 194 ppm); chromium (27,000 - 43,100 ppm); copper (3,060 - 3,680 ppm); iron (79,700 - 122,000 ppm); lead (575 - 1,290 ppm); manganese (318 - 628 ppm); nickel (80 - 159 ppm); silver (15 - 29.6 ppm); zinc (62,900 - 99,000 ppm); tetrachloroethene (360 x 10^{-3} ppm); chlorobenzene (49 x 10^{-3} ppm); 2, 4 dimethylphenol (4,000 x 10^{-3} ppm); phenol (6900 x 10^{-3} ppm); bis(2-ethylhexyl)phthalate (34,000 x 10^{-3} - 83,000 x 10^{-3} ppm); aluminum (44,400 - 50,500 ppm); arsenic (36.7 - 40.6 ppm); barium (2,140 - 2,250 ppm); beryllium (3.2 ppm); calcium (5,740 - 12,600 ppm); selenium (4.74 ppm); sodium (8,400 ppm); vanadium (386 - 646 ppm); and cyanide (21 - 45.2 ppm) (Ref. 17, p. 1 through 6 of 168). The soil samples were obtained from the drum storage area and contained: methylene chloride (13 x 10^{-3}-15 x 10^{-3} ppm); bis(2-ethylhexyl)phthalate (2300 x 10^{-3} ppm); aluminum (4190-4390 ppm); iron (1530-7220 ppm); chromium (7.4-10 ppm); manganese (40-181 ppm); and zinc (189 ppm) (Ref. 16, pp. 2 through 6 of 168). The effluent sample indicated the presence of manganese (612 ppm); and copper (57-110 ppm) (Ref. 17, p. 6 of 168). The sediment samples were collected from the recharge basin and contained methylene chloride (8-18 ppm) (Ref. 17, p. 6 of 168). The groundwater sample obtained from the production well near the laboratory building was non-detect for all parameters (Ref. 9, p. 31 of 39; Ref. 17, pp. 2 through 4 of 168).

Chemical Management Inc. conducted a sampling analysis of sludge from two leaching pools in October 1990 (Ref. 18, p. 2 of 2). These tanks were scheduled to be emptied and abandoned in place, since removing the tanks might compromise the integrity of the manufacturing building adjacent to it (Ref. 18, p. 1 of 2; Ref. 19, p. 1 of 1). The analytical results indicated the presence of chromium (0.2 ppm); cadmium (0.44 ppm); copper (2.32 ppm); iron (0.13 ppm); lead (0.17 ppm); zinc (17.5 ppm); and nickel (0.6 ppm) (Ref. 18, p. 2 of 2).

During tank exposure and cleanout by EnviroServ Personnel and RGM in February 1991, groundwater infiltration was encountered below the lowermost concrete ring (Ref. 20, p. 1 of 1). This event led to the discovery that these tanks were actually concrete leaching pools or drywells with concrete slotted sides and an open soil bottom (Ref. 20, p. 1 of 1). Zinc plating operations discharged rinsates into the drywells from about 1966 to 1984 and spray paint effluents from about 1966 to 1978 (Ref. 13, p. 2 of 3). Further remediation including a manual entry and cleanout was planned for a later date (Ref. 20, p. 1 of 1).

The SCDHS witnessed a sampling event on the two leaching pools on March 7, 1991 (Ref. 21, p. 1 of 1). RGM was contracted to remove groundwater that had infiltrated into the bottom of the pools (Ref. 21, p. 1 of 1). As a result of this removal, more groundwater and blue colored soil infiltrated from outside the bottom ring (Ref. 21, p. 1 of 1). An attempt was made to collect all of the discolored soil and groundwater (Ref. 21, p. 1 of 1). However, before removal was complete the project was halted, since the integrity of the adjacent building's foundation was compromised (Ref. 21, p. 1 of 1). Soil samples from the two pools were analyzed for metals and VOCs (Ref. 21, p. 1 of 1). Samples indicated the following parameters: chromium (0.36 - 0.90

ppm); copper (0.07 - 0.25 ppm); iron (12.26 - 54.6 ppm); lead (0.02 ppm); nickel (0.01 - 0.06 ppm); and zinc (0.76 - 6.05 ppm) (Ref. 22, pp. 1, 3, 5 of 6).

On March 11, 1991 sludge samples were collected from the pools at the lower most concrete ring (Ref. 15, p. 1 of 1). Results indicated the presence of aluminum (1900 - 2200 ppb); chromium (180 - 360 ppb); copper (40 - 70 ppb); cyanide (110 - 130 ppb); iron (1290 - 4220 ppb); lead (50 ppb); magnesium (70 - 210 ppb); titanium (40 - 50 ppb); zinc (2450 - 3070 ppb); barium (50 ppb); calcium (290 - 4030 ppb); and sodium (190 - 870 ppb) (Ref. 22, p. 12 of 65). The SCDHS informed the DTB site that further remediation of the leaching pools was needed due to elevated levels of inorganic constituents. The remediation was to include the removal of contaminated perimeter soils and concrete rings; and the preparation of a work plan for soil excavation, soil borings, monitoring well installation and sampling analysis (Ref. 24, p. 1 of 2; Ref. 25, p. 1 of 1).

Groundwater Technology installed four monitoring wells on site in June 1992 to assess the impact of the leaching pools on groundwater quality (Ref. 8, p. 4 of 17; Ref. 26, p. 1 of 2). Each well was screened from 15 to 30 feet below grade (Ref. 8, p. 4 of 17). Four soil samples were obtained from MW-2 at the following depths below grade: SS2, 9-11 feet; SS3, 14-16 feet; SS4, 19-21 feet; SS5, 24-26 feet (Ref. 8, p. 9 of 17). Analysis indicated the presence of ethylbenzene (1.1×10^{-3} ppm); xylenes (7.7×10^{-3} ppm); chromium (1.9×10^{-3} - 6×10^{-3} ppm); copper (2.6×10^{-3} ppm); and zinc (4.4×10^{-3} - 39×10^{-3} ppm); (Ref. 8, pp. 10, 14 of 17; Ref. 23, pp. 13, 14 of 65).

Groundwater samples were collected from each well in July 1992 and analyzed for benzene, toluene, xylene, and ethylbenzene (Ref. 8, p. 16 of 17). Since groundwater flow was estimated toward the southwesterly direction, MW-1 would serve as an upgradient, background well. MW-2 would be immediately downgradient of drywell 1 (leaching pool #1). MW-3 served as a perimeter downgradient well (Ref. 26, p. 1 of 2). MW-4 was placed between the drywells and SCWA wellfield near the southeastern boundary of the site (Ref. 26, p. 1 of 2). MW-1, MW-3, and MW-4 results were nondetect for all the parameters; however, MW-2 indicated concentrations of ethylbenzene (20 ug/l); and xylenes (37 ug/l) (Ref. 8, p. 16 of 17; Ref. 23, p. 15 of 65).

In December 1992, the remaining three leaching pools were sampled by SCDHS (Ref. 27, pp. 1, 2 of 2). Volatile organics and metals detected were: xylenes (620×10^{-3} - 1200×10^{-3} ppm); p-ethyltoluene (850×10^{-3} - 1200×10^{-3} ppm); 1, 2, 4, 5 tetramethylbenzene (2100×10^{-3}); 1,3,5 trimethylbenzene (860×10^{-3} - 2200×10^{-3} ppm); 1, 2, 4 trimethylbenzene (1700×10^{-3} - 5400×10^{-3} ppm); cadmium (2.7 - 27 ppm); chromium (200 - 6,300 ppm); copper (110 - 350 ppm); iron (8,900 - 14,000 ppm); lead (34 - 190 ppm); manganese (38 - 100 ppm); nickel (7 - 12 ppm); silver (1.2 ppm); and zinc (5,800 - 29,000 ppm) (Ref. 23, pp. 17 and 18 of 65).

A plating sump located inside the manufacturing building which discharges into the drywells was sampled in March 1993. Cyanide (175 ppm); barium (240 ug/L); cadmium (74 ug/L); chromium (30 ug/L); mercury (65 ug/L); and selenium (7 ug/L) were detected (Ref. 23, p. 20 of 65).

DTB contracted Chemical Waste Management to remove the remaining sludge, soils, and residual process liquids from the five drywells in July 1993 (Ref. 28, p. 1 of 1; Ref. 29, p. 1 of 1). Post

excavation soil samples were collected from pools 3, 4 and 5 in September 1993. Sampling analysis revealed the following: toluene (2×10^{-3} ppm); tetrachloroethene (9×10^{-3} ppm); aluminum (500 - 2900 ppm); cadmium (0.14 - 5 ppm); chromium (3.3 - 3900 ppm); copper (6.1 - 22 ppm); cyanide (5 - 100 ppm); iron (940 - 4900 ppm); lead (13.1 - 250 ppm); manganese (13 - 75 ppm); nickel (1.2 - 12 ppm); silver (0.08 ppm); titanium (14 - 28 ppm); and zinc (84 - 6400 ppm) (Ref. 23, p. 21, 22 of 65).

The final leaching pool decommissioning plan was prepared in March 1994 (Ref. 23, p. 1 through 65 of 65). The report indicated that each of the leaching pool concrete ring structures have been pressure washed and the sludge contents and contaminated soils were removed and disposed of off site for treatment (Ref. 23, p. 25 of 65). In addition to drywell 4, drywells 1 and 2 required further remediation due to elevated levels of inorganic constituents (Ref. 23, p. 25 of 65; Ref. 30, p. 1 of 1). A recommendation was made that the concrete rings in pools 1 and 2 also be removed; however, due to the structural integrity of the adjacent building, an alternative closure plan was recommended (Ref. 23, p. 27 of 65).

Post excavation samples were collected from the leaching pools on October 13, 1994 following the removal of approximately 61 tons (90 cubic yards) of soil (Ref. 31, p. 1 of 1; Ref. 32, p. 1 of 2). Sample depths ranged from 13.5 to 17 feet below grade and were analyzed for metals and cyanide (Ref. 32, p. 1, 2 of 2; Ref. 33, p. 1 of 1). Post excavation soil samples contained aluminum (260 - 680 ppm); calcium (120 - 340 ppm); iron (660 - 1300 ppm); magnesium (50 - 110 ppm); manganese (40 ppm); potassium (110 - 15- ppm); sodium (130 - 200 ppm); zinc (40 - 170 ppm); chromium (50 ppm) (Ref. 34, pp. 2, 4, 6, 8, 10 of 10).

DTB outlined additional work to be performed during the final closure process (Ref. 31, p. 1 of 1). Initially, each pool would be polyethylene lined. Each slot in the concrete rings would then be hand scraped and steam cleaned to remove any residual waste (Ref. 31, p. 1 of 1; Ref. 38, p. 1, 2 of 2). The liner and residuals would be disposed of off-site, including an additional one foot of soil from the bottom of each drywell. The closure process was completed on August 18, 1995 (Ref. 40, p. 1 of 1; Ref. 41, p. 1 of 1). However, this closure does not constitute a qualified removal as per EPA guidelines, since it occurred eight years following the site inspection evaluation.

In August 1995, the final closure of the five leaching pools was completed and included the following steps: Step 1: All contaminated soils were removed via vacuum truck and disposed of off site. Step 2: An endpoint sample from each pool was obtained. Step 3: The bottom of each well was sealed with concrete and filled with bank run sand. Step 4: A geotextile cover was installed over the leaching pool ring structures to eliminate the threat of any leachate entering the drywells (Ref. 23, p. 27 of 65; Ref. 39, p. 1 of 2).

The last step of the final closure plan was to assess the impact to groundwater. The SCDHS collected groundwater well samples from MW-2, MW-3, and MW-4 in May 1995 (Ref. 35, p. 1 of 1). Samples were analyzed for volatile organic and inorganic chemicals. Results indicated the presence of manganese (363 - 3250 ug/l); and zinc (40.5 - 481 ug/l) (Ref. 36, p. 7 of 33). In addition, air monitoring utilizing an OVA was conducted (Ref. 36, p. 1 of 33). All readings were indicative of normal background levels (Ref. 36, p. 1 of 33).

Ebasco personnel conducted an off-site reconnaissance at the DTB site in September 1995. Off-site activities included a perimeter survey, and documentation of observations and photographs in the field notebook. There were no signs of airborne particulates, stressed vegetation, foul odors, or discolored soils visible from the front of the property (Ref. 4, p. 10 of 20).

Evaluation of Existing Information

Existing information and analytical data were used to evaluate the DTB site. The analytical data did not include any background samples nor has it been validated in accordance with USEPA procedures. Therefore, the site is evaluated on a potential-to-release basis.

The contamination from the five leaching pools has been removed since the site inspection evaluation under supervision by the SCDHS (Ref. 12, p. 1 of 3). Post excavation samples revealed that the remaining soils contained residual contamination, possibly consistent with naturally occurring levels, therefore, the SCDHS granted DTB permission to seal the former leaching pools according to the closure plan (Ref. 23, p. 27 of 65; Ref. 37, p. 1 of 1; Ref. 39, p. 1 of 2; Ref. 43, p. 1 of 1). The leaching pools have been sealed with concrete, backrun sand, and a plastic membrane (Ref. 31, p. 1 of 1; Ref. 37, p. 1 of 1; Ref. 40, p. 1 of 1).

Monitoring wells were installed at the site to evaluate the potential impacts of the former leaching pools on groundwater quality. The 1992 sampling event MW-2 indicated the presence of two parameters in MW-2: ethylbenzene and xylene. The background well, MW-1 and the two downgradient wells, MW-3 and MW-4, were non-detect for all parameters. In 1995, following further drywell remediation, MW-2, MW-3, and MW-4 were sampled for volatile organics and inorganics. Ethylbenzene and xylene were non-detect for all wells. Manganese and zinc were detected in the samples. There are many commercial and industrial areas surrounding the site; therefore, any potential off-site contamination would be difficult to attribute to DTB (Ref. 4, p. 11 of 20).

Hazard Assessment

Updated additional information and data collected to further evaluate the site to determine the need for CERCLA remedial action included groundwater population data, wetlands information, 4-mile radius population data, the off-site reconnaissance field notebook, the Islip floodplain map, various correspondence, analytical data, sensitive environment information, and municipal water company information. Several agencies were also contacted to obtain information about the DTB site. These contacts included the Suffolk County Department of Health Services, and the state and local Department of Environmental Conservation.

Source Description

Based on the available information one source was identified at the DTB site, as the five industrial leaching pools, or drywells. The five leaching pools have been remediated and sealed with concrete, and the contaminated soils have been removed (Ref. 31, p. 1 of 1; Ref. 37, p. 1 of 1; Ref. 40, p. 1 of 1). However, this remediation occurred eight years after the site inspection evaluation and, therefore, it does not constitute a qualified removal as per USEPA guidelines. The five leaching pools have been aggregated into one source since they received the same

contaminants, are in close proximity to one another, and threaten the same aquifer. Since the drywells are currently nothing but open bottom concrete rings with slotted sides, the source type has been characterized as contaminated soil.

Groundwater Pathway

The groundwater pathway is evaluated on a potential-to-release basis. Suffolk County is underlain by a sequence of upper Cretaceous and Pleistocene sediments that were deposited on a southeasterly sloping bedrock surface (Ref. 45, p. 3 of 4). These deposits reach a maximum thickness of about 2,000 feet in southeastern Long Island (Ref. 45 p. 3 of 4). The uppermost two aquifers, the Magothy (Cretaceous) and upper glacial (Pleistocene) represent the major sources of groundwater supply. The top sequence forms the upper glacial aquifer which ranges from 0 to 600 feet thick (Ref. 45, p. 3 of 4). The upper glacial aquifer is composed of glacial deposits consisting of till, clay, sand, and gravel; outwash deposits consisting of quartz grained sand and gravel; and glacio-lacustrine deposits consisting of silt and clay (Ref. 46, p. 3 of 4). These deposits are typically characterized by highly permeable, medium to coarse-grained sand and gravel. In the area of the DTB site, the depth to groundwater is about 18 feet and the maximum aquifer thickness is 200 feet (Ref. 8, p. 7 of 17; Ref. 66, p. 2 of 2). Horizontal flow is dominant toward the southwest, with an average hydraulic conductivity of approximately 270 feet per day (Ref. 45, p. 3 of 4; Ref. 46, p. 4 of 4; Ref. 47, p. 2 of 2).

The Magothy aquifer underlies the upper glacial aquifer, and in most places these aquifers are hydraulically interconnected (Ref. 48, p. 3 of 3). The Magothy Formation is a thick unit of continental deposits consisting of complex interbedded layers of sand, silt, clay, and some gravel (Ref. 49, p. 3 of 3). The maximum thickness of the Magothy Formation is about 1,000 feet, with an average hydraulic conductivity of 50 feet per day (Ref. 49, p. 3 of 3; Ref. 50, p. 1 of 1). Wells screened in the Magothy Formation commonly yield more than 1,000 gallons per minute (gpm), due to artesian conditions (Ref. 49, p. 3 of 3).

The entire population of Long Island receives its potable water supply from groundwater, since Long Island is a sole source aquifer. Therefore, there is a wellhead protection (WHP) program in place for both the upper glacial and Magothy aquifers (Ref. 51, p. 6 of 6).

The SCWA operates a blended municipal water supply system consisting of a total of 404 wells serving 311,997 connections (Ref. 44, p. 2 of 11; Ref. 52, p. 2 of 4). Within the target distance limit (TDL) there are 15 wells screened in the upper glacial aquifer and 24 wells are screened in the Magothy aquifer (Ref. 44, pp. 6, 7, 9 of 11; Ref. 52, p. 2 of 4). The wells range in depth from 89 to 202 feet, in the upper glacial aquifer, and from about 234 to 730 feet below grade in the Magothy aquifer (Ref. 44, p.p. 6, 8, 9, of 11). A population of 6,996 is served within 0 and 1/4 mile; 0 within 1/4 to 1/2 mile; 0 within 1/2 to 1 mile; 23,320 within 1 to 2 miles; 37,312 within 2 to 3 miles; and 23,320 within 3 to 4 miles (Ref. 52, pp. 2, 3 of 4; Ref. 53, pp. 12, 13 of 13). The nearest SCWA wellfield is located approximately 0.08 mile east of the site on Church Street (Ref. 4, p. 8 of 20). The groundwater flow direction is due south across the site (Ref. 8, p. 8 of 17; Figure 2).

There are private drinking water wells within the TDL (Ref. 44, p. 4 of 11). The population using private wells for drinking water supply in each of the distance categories is as follows:

0 between 0 and 1/4 mile; 40 between 1/4 to 1/2 mile; 128 between 1/2 to 1 mile; 245 between 1 to 2 miles; 593 between 2 to 3 miles; and 1484 between 3 to 4 miles (Ref. 52, p. 1 of 4; Ref. 53, pp. 12, 13 of 13). Due to the depth to the Magothy aquifer (i.e., approximately 234 feet), all private wells are assumed to be screened in the water-table aquifer.

Surface Water Pathway

Surface water and/or sediment samples have not been collected in connection with any investigation conducted at the site, and there have been no direct observations of releases to surface water; therefore the surface water pathway is evaluated on a potential-to-release basis.

There are no sewers located on the DTB site, nor does the county operate any sewers on Church Street (Ref. 12, p. 1 of 3; Ref. 54, p. 1 of 1). Although, during the off-site reconnaissance, two sewers were observed on Church Street in the vicinity of the site (Ref. 4, pp. 11, 19, 20 of 20). However, area topography appears to slope toward the northern boundary and therefore it is unlikely that any potential runoff from the DTB site could travel upgradient and reach Church Street (Ref. 4, p. 10 of 20). The nearest surface water body is Brown Creek, which is located greater than 1.5 miles southeast of the site (Ref. 55, p. 1 of 1; Ref. 56, p. 1 of 1). Intervening features to this pathway include various industrial and commercial properties, residential communities, and several multi-lane roadways including Sunrise Highway (Ref. 4, pp. 3, 4, 8, 11 of 20). Therefore, there is not a well-defined pathway through which runoff could reach Brown Creek.

The 15-mile surface water target distance limit (TDL) consists of Brown Creek and Great South Bay (Ref. 62, p. 1 of 1). Brown Creek discharges into Great South Bay at a point approximately 3 miles downstream (Ref. 55, p. 1 of 1). Great South Bay comprises the remaining 12 miles to complete the target distance limit (Ref. 55, p. 1 of 1). The average flow rate for Brown Creek is less than 10 cubic feet per second (cfs) (Ref. 57, p. 1 of 1).

Brown Creek is designated as Class C fresh surface waters (Ref. 58, p. 5 of 10). The primary uses of Class C waters are fishing and some recreational activities (Ref. 58, p. 8 of 10). Fish most likely caught for human consumption are blue gill, large mouth bass, pumpkin seed, and yellow perch; however, no annual production rates were available (Ref. 57, p. 1 of 1). Great South Bay is designated as Class SA saline surface waters (Ref. 58, p. 6 of 10). The primary uses of Class SA waters are commercial shellfishing; however, in Great South Bay, shellfishing is impaired due to pathogens from urban runoff (Ref. 58, p. 9 of 10). Fish most likely caught for human consumption are flounder, fluke, scup, blueflish, striped bass, blackfish and possibly trout (Ref. 57, p. 1 of 1).

Long Island depends solely on groundwater as their potable water supply; hence, there are no surface water intakes on Brown Creek or Great South Bay (Ref. 44, p. 4 of 11; Ref. 59, p. 1 of 1). The DTB site is located in an area of minimal flooding, known as Zone C which is outside the 500-year floodplain (Ref. 60, p. 2 of 2). The 2-year, 24-hour rainfall for Suffolk County is about 3.3 inches (Ref. 61, p. 2 of 2).

Wetland frontage within the 15-mile downstream pathway from the site is approximately 27 miles (Ref. 62, p. 2 of 3). No wetlands are present on the DTB site (Ref. 55, p. 1 of 1). No sensitive

environments have been identified along the 15-mile surface water pathway (Ref. 63, pp. 1 through 10 of 10).

Soil Exposure Pathway

There are no areas of observed contamination on the DTB site. All soil samples were taken at depths greater than two feet and no background samples were collected.

Surface water runoff from DTB will not travel toward the nearest residential community across Church Street, since the topography of the area has been altered by grading operations for the housing developments. This is evident by the large berm opposite the homes along Church Street and these homes appear to have been constructed on a greater slope than the homes farther down the street (Ref. 4, p. 19 of 20). Therefore it is improbable that any surface contamination would reach these homes. Furthermore, the soils in this area are deep, well drained, moderately coarse soils, formed in a mantle of sandy loam over thick layers of coarse sand and gravel (Ref. 64, pp. 3 through 5 of 5).

There are no day-care centers or schools within 200 feet of areas of the site. There are approximately 16 homes or 48 people within 200 feet of the DTB site (Ref. 4, p. 11 of 20). There are 214 people within 1/4 mile of the site, 991 between 1/4 and 1/2 mile, and 4670 between 1/2 and 1 mile (Ref. 53, pp. 12, 13 of 13). DTB employs 420 full-time workers (Ref. 12, p. 1 of 3). Site access is limited by a 24-hour per day security guard and the site is partially fenced (Ref. 11, p. 3 of 4). The site is surrounded on three sides by other industries and can be accessed only from Church Street (Ref. 4, p. 8 of 20).

There are no terrestrial sensitive environments located on or within 200 feet of the site (Ref. 63, pp. 1 through 10 of 10).

Air Pathway

The air pathway is evaluated on a potential-to-release basis. The HNU photoionizer and the OVA flame ionization detector indicated no readings above background during the site investigation and sampling events conducted in July 1987 and May 1995 (Ref. 9, pp. 21 through 31 of 39; Ref. 35, p. 1 of 1). There have been no direct observations of releases to air from contaminated soils nor were any airborne particulates or dust clouds noted during the off-site reconnaissance (Ref. 4, p. 10 of 20). The closest residence is approximately 100 feet from the southern portion of the site (Ref. 4, p. 5 of 20). There are approximately 118,046 persons living within the 4-mile radius of the site (Ref. 53, pp. 12, 13 of 13).

The closest sensitive environment is located 2.5 miles south west of the site and is identified as the Slender Nutrush (state endangered) (Ref. 62, p. 3 of 3; Ref. 63; p. 5 of 10). Other state endangered species, located 3 and 3.5 miles from the site are: Yellow Milkwort, Pixies, Slender Nutrush, Sandplain Gerardia, Barratt's Sedge (Ref. 56, p. 1 of 1; Ref. 62, p. 3 of 3; Ref. 63, pp. 7 through 9 of 10). The Crested Fringed Orchis, Sandplain Wild Flax, southern Yellow Flax, Button Sedge, and Pinweed are state threatened species located between 3 and 3.5 miles of the site (Ref. 56, p. 1 of 1; Ref. 62, p. 3 of 3; Ref. 63, pp. 5, 7, 8 of 10). The Connetquot River habitat is the largest continuous area of undeveloped land in Suffolk County that encompasses

the entire river watershed (Ref. 65, pp. 3, 5, 6, of 6). It is a state designated significant habitat vital to the survival of New York's coastal fish and wildlife resources (Ref. 65, p. 2 of 6). These significant habitats typically support populations of endangered, threatened, or special concern species; support populations of species that have significant commercial, recreational, or educational value; represent a habitat non-indicative to the state or coastal area; and one essential to the survival of extensive populations of fish and wildlife (Ref. 65, pp. 2, 3, 4 of 6). The Connetquot River habitat is located 3 miles west of the DTB site (Ref. 55, p. 1 of 1).

There are approximately 1,185 acres of wetlands located within a 4-mile radius of the site (Ref. 62, p. 1 of 3). The wetland acreage from 0 to 1/4 mile is 0; from 1/4 to 1/2 mile is 0; from 1/2 to 1 mile is 0; from 1 to 2 miles is 28; from 2 to 3 miles is 357; and from 3 to 4 miles is 801 acres (Ref. 55, p.1 of 1; Ref. 62, p. 1 of 3).

Summary

The existing information was sufficient to evaluate the Dayton T. Brown site. No background soil samples were available. There is no documented contamination or observed migration at the site. Furthermore, there are no areas of observed contamination within 200 feet of any schools, day-care centers, or terrestrial sensitive environments. Approximately 48 people live within 200 feet of the site and 118,046 people within a 4-mile radius of the site. There are sensitive environments within the 4-mile air pathway of the site, and the nearest wetland is located about two miles from the site. However, no documentation is present to indicate that any of these areas have been contaminated as a result of site activities, nor are any of these areas located on the DTB property.

The nearest surface water is Brown Creek, located greater than 1.5 miles southeast of the site. Long Island depends solely on groundwater and therefore, there are no surface water intakes located within the 15-mile target distance limit. Potable groundwater is supplied by municipal water supply companies and residents utilizing private domestic wells. The nearest municipal well is located approximately 0.08 mile east of the site.

Post excavation soil samples indicated residual contamination when compared to previous sampling events and therefore only minimal contamination is presumed to be at the site. Presently, the drywells pose no threat to the air, soil, or surface water pathways since most contamination has been removed and the drywells are sealed with concrete.

Existing analytical data do not indicate evidence of contaminant migration via groundwater. Therefore, no pathways of concern can be identified, and there are no threats to human population or to the environment.

Prepared by:

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Reference 1

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federal register

Friday
December 14, 1990

Part II

Environmental Protection Agency

40 CFR Part 300
Hazard Ranking System; Final Rule

Reference 2

United States
Environmental Protection
Agency

Solid Waste and
Emergency Response
(5204G)

9360.4-18
PB94-963506
EPA 540-R-94-0(
June 1994

EPA

Superfund Chemical Data Matrix

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Reference 3

Ref. 3
p.1.of1

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #1
LI USING CUSTOM RULER OR COORDINATOR™

SITE NAME: Dayton Brown CERCLIS #: NYD002050177

AKA: SSID:

ADDRESS: 555 Church St

CITY: Bohemia STATE: NY ZIP CODE: 11716

SITE REFERENCE POINT: Center of site

USGS QUAD MAP NAME: Patchogue TOWNSHIP: ___ N/S RANGE: ___ E/W

SCALE: 1:24,000 MAP DATE: 1967 SECTION: ___1/4 ___1/4 ___1/4

MAP DATUM: (1927) 1983 (CIRCLE ONE) MERIDIAN:

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy):

LONGITUDE: 40° 45' 00" LATITUDE: 73° 00' 00"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:

LONGITUDE: 40° 45' 00" LATITUDE: 73° 05' 00"

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH BOTTOM OF GRID. ALIGN THE TOP OF THE SCALE WITH THE TOP OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1- OR 0.5-SECOND INTERVALS (INTERPOLATE).

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1' 16.30"

D) ADD TO STARTING LATITUDE: 40° 45' 00.__" + 1' 16.30" =

SITE LATITUDE: 40° 46' 16.30"

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH RIGHT SIDE OF GRID. ALIGN THE TOP OF THE SCALE WITH THE LEFT SIDE OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1- or 0.5-SECOND INTERVALS. (INTERPOLATE)

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): __' 56.0"

D) ADD TO STARTING LONGITUDE: 73° 05' 00.0" + __' 56.0" =

SITE LONGITUDE: 73° 05' 56.0"

INVESTIGATOR: C. Kovar DATE: 3/14/95

Reference 4

Name E. Christine Kovari

Address

Phone

Projects

Dayton T. Brown Site
Bohemia, Suffolk County, NY
CPA ID # NY002050177

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Projects (continued)

Dayton T Brown Site 10/5/95
Bohemia, Suffolk County NY
ESW 0046 0000 60002

Table of Contents

Dayton T. Brown 1-10
photo log 10-

[illegible] 10/5/95

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①

Dayton T Brown Site 10/5/95
Bohemia NY.
Weather: pouring rain
about 62°

Left office 8 am
arrived at site 1100 to
conduct an off site reconnaissance
Christine Kovari: Task Leader
11[15] drove on Church Street
toward Sunrise highway
to identify Brown Creek.
The creek is located past
where Sunrise highway
(and other major roads)
crosses Church Street.
No way to attribute
potential contamination
to DTB, since it is 1.5 miles away
All activities confined to HASP
11[30] Heading west on Church
St back to DTB, noting
types of businesses
and homes.

Christine Kovari 10/5/95

Ref. 4
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②

DTB Site 10/5/95

Clothing supply co; carpet + upholstry shop; micro manufacturing, fire dept, electronics, ballfield, mid island sanitation transfer station, commercial supplies, mobile homes, print shop, small businesses and homes, ~~[illegible]~~ Precast cement plant, SCWA wellfield and Granger Drive down Johnson + Keyland Ave's → all industrial DaVinci Drive: transmission shop, Synco Chemical Corp, vacant lots w/sand + debris piles, chromate, back of precast cement foundry, Commander electronics.

1150 many of the above surrounding businesses were labeled on tax

Chris Kran 10/5/95

Ref. 4
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③

DTB site 10/5/95

map (following page) in more detail.

1200 Parked on Nicole Court directly across from DTB (right building) to conduct house count. The nearest residence is directly across the street from DTB, however there is a large bearm on opposite side of Church St. w/a fence

1215 P1 from Nicole Court (N) facing DTB (Rt building) P2+3 from sidewalk directly opposite Church St by Nicole Court of either side of Right DTB building. On P3 - also evident enterance driveway with security

Chris Kwan
10/5/95

Ref. 4
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DTB site 10/5/95

guard booth in distance.
In P2 can see partial fencing.
1217 - Count houses on Sal Ct = 13
1230 - Count houses on Nicole Court = 11 homes and a drainage basin
Sal Ct + Nicole Court is dead end
1250 - Drive to Westminster DR which is the development across from left DTB building to conduct house count
CK
Only counted 7 homes which could be included in the homes within 200 feet
1300 labeled all homes on tax map.

CKovari 10/5/95

Ref 4
P 60 of 20

DTB Site 10/5/95

1310 walked up + down Church Street on sidewalk across from DTB. Took picture of left DTB building and driveway (N), panoramic shot: P4 + P5.

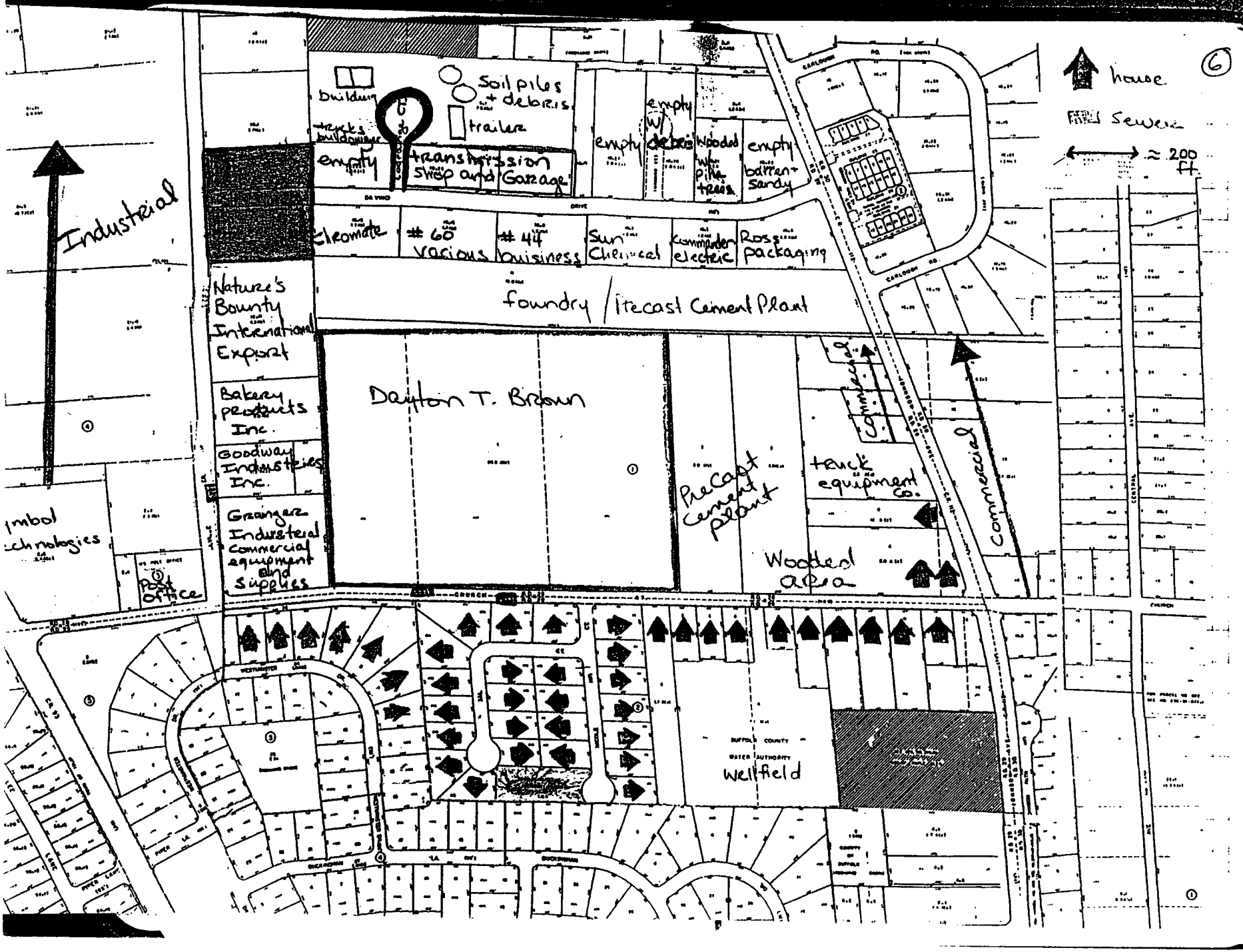
1317 P6 + P7 also panoramic shot of left building facing North

1325 P8 picture of area between DTB (left building) and Granger industrial + commercial supplies, next door.

1335 walking back toward nicole Court (east on Church Street) note: (K) of large bearm and fence. next homes too close to take picture

Ckovari 10/5/95

Ref 4
P 7 of 20



6
house
Sewer
≈ 200 ft.
Industrial
building
Soil piles + debris
trailer
trucks buildowner
empty
transmission shop and Garage
empty
empty w/ debris
Wooded w/ pine trees
empty barren + sandy
Chromate
60 vacious
44 buisiness
Sun Chemical
Commander electric
Ross packaging
foundry / Precast Cement Plant
Nature's Bounty International Export
Bakery products Inc.
Goodway Industries Inc.
Granger Industrial commercial equipment and supplies
Dayton T. Brown
Precast cement plant
truck equipment co.
Commercial
Commercial
Wooded area
Post office
Wellfield
SUFFOLK COUNTY WATER AUTHORITY

Ref. 4
P. 8 of 20

DTB Site 10/5/95

1345 P9 of east view down Church street

1355 P10 of west view up Church street, can see Granger building

1410 Continue walking down Church Street to SCWA. Wellfield took P11 of SCWA Wellhouse

1420 Went back to car and drove past large barn and fence to take P12 facing South. The homes behind picture are the ones on Sal Court. These are also the nearest residence. These homes are on a

C Kovan 10/5/95

DTB site 10/5/95

greater slope than the ones down the Street

1430 Once again drove on Orville Drive, Johnson Ave, Darling Drive, Lagrange Court to fill in tax map of businesses, homes, etc. (See tax map for details)

1500 drove back to Nicole Court to document general observations - no foul odors, no airborne particulates, no stressed vegetation or stained soils. Driveways of DTB seem to slightly slope back (N) toward parking lot. The front lawns slightly slope toward Church Street. Only a partial fence.

C. Koran 10/5/95

DTB Site 10/5/95

was visible. The guard booth can be seen left of building #2 in driveway. Two sewers were noted on Church St. One on DTB side and one across street. Total number of homes within 200 feet are 16. when multiplied by county average (3.02) There are a total of 43.32 residents w/in 200 feet of DTB.

There are many commercial + industrial areas surrounding DTB ∴ any potential contamination would be very difficult to attribute to DTB.

1530 Went back on Church Street to take pictures of the Okonai 10/5/95

(10)

DTB site 10/5/95

the two sewers on Church Street. One on each side of Church Street P13 + P14. See tax map for locations. Runoff from DTB is not likely to reach Church St.

1600 Travel to SCDHS to copy DTB files concerning leaching pools

1500 leave SCDHS to return back.

C Kovan 10/5/95

P. 1 October 5, 1995
A north view of Dayton T. Brown's Engineering and Test Division from across the street at Nicole Court.

P. 2 October 5, 1995
A north view of the right side of the Engineering and Test Division, noting the fence in the background.

P. 3 October 5, 1995
A north view of the left side of the Engineering and Test division, noting the guard booth on the right side of the driveway.

P. 4 & P. 5 October 5, 1995
A panormaic view of the Manufactuirng building and driveway.

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D1396a.LYN

P. 6 & P. 7 October 5, 1995
A panoramic view of the Manufacturing Building from the opposite side of Church Street.

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D1396a.LYN

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P. 8 October 5, 1995
A northwest view of Dayton T. Brown and Granger Industrial Supplies.

P. 9 October 5, 1995
An east view of Dayton T. Brown and Church Street.

P. 10 October 5, 1995
A northwest view of Church Street and Granger Industrial Supplies.

P. 11 October 5, 1995
A south view of the Suffolk County Water Authority Wellfield located on Church Street.

P. 12 October 5, 1995
A south view, from Church Street, of the large berm and fence between the homes on Sal Court and Dayton T. Brown.

P. 13 October 5, 1995
A north view of the storm drain by the western property line of Dayton T. Brown.

P. 14 October 5, 1995
A west view of the storm drain opposite Dayton T. Brown on Church Street.

Reference 5

FORM 1 GENERAL

EPA

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

F N Y 0 0 0 2 0 5 0 1 7 7

Refs

DEFIGS 2

LABEL ITEMS	
I. EPA I.D. NUMBER	PLEASE PLACE LABEL IN THIS SPACE
III. FACILITY NAME	
V. FACILITY MAILING ADDRESS	
VI. FACILITY LOCATION	

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	MARK 'X' NO	MARK 'X' FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' YES	MARK 'X' NO	MARK 'X' FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X			D. Is this a proposed facility *(other than those described in A or B above)* which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP Dayton T. Brown Inc.

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 Single C. Robert Secretary	516 589 6300

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 555 Church Street

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Bohemia	NY	11716

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 555 Church Street

B. COUNTY NAME

Suffolk

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 Bohemia	NY	11716	

EPA Form 3510-1 (Rev. 10-80)

CONTINUE ON REVERSE

A. FIRST	B. SECOND
C 7 7397 (specify) Commercial Testing Lab	C 7 8911 (specify) Engineering Services
C. THIRD	**D. FOURTH**
C 7 3444 (specify) Sheet Metal	C 7 2741 (specify) Technical Manuals & Illustrations

Ref 5 P. 2 of 2

VIII. OPERATOR INFORMATION

A. NAME

C 8 Dayton T. Brown Inc.

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; If "Other", specify.)

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC (other than federal or state)
O = OTHER (specify)

P (specify)

D. PHONE (area code & no.)

C A 516 589 6300

E. STREET OR P.O. BOX

555 Church Street

F. CITY OR TOWN

C 8 Bohemia

G. STATE NY

H. ZIP CODE 11716

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): C T I 9 N NY0075809	**D. PSD** (Air Emissions from Proposed Sources): C T I 9 P
B. UIC (Underground Injection of Fluids): C T I 9 U	**E. OTHER** (specify): C T I 9 (specify)
C. RCRA (Hazardous Wastes): C T I 9 R	**E. OTHER** (specify): C T I 9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

1. Engineering and Testing Services including EMI, RF, Vibration, Electronics, Reverse Engineering, Test Stands, Reliability and Engineering Analysis (Commercial & Government)

2. Manufacturing to customer specification Fabricated Metal Chasis, Frames, Door and Cabinets for use in Computer, Medical and Office Products.

3. Prepare and write Technical Manuals and Publications including Illustrations for Commercial and Government Manuals.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
SECRETARY		11/24/89

COMMENTS FOR OFFICIAL USE ONLY

☆ U.S. Government Printing Office : 1985 - 486-785/32991

Reference 6

Ref. 6
p. 1082

DAYTON T. BROWN INC.

CHURCH STREET • BOHEMIA, LONG ISLAND, NEW YORK 11716
AREA CODE 516 589-6300
TWX: 510-228-7323
TELEX: 96-1336

9 December 1983

New York State Department of
Environmental Conservation
Regulatory Affairs Unit
Bldg. 40 SUNY-Room 219
StonyBrook, NY 11794

Attention: Karen N. Chytalo

Dear Ms Chytalo:

Enclosed please find the applications for Dayton T. Brown Inc. SPDES permit. As discussed the two (2) areas not addressed on the application is the possible residual hazardous substances in the Photo Lab rinse water and the analysis that may be required in Part V-A.

We are presently contacting a Lab to have these analysis made and you shall be provided this information as soon as it is available.

Should you find any deficiencies in procedure or other information that is lacking, please do not hesitate to contact the undersigned.

In addition, I would like to thank yourself, Mr. Snyder and Mr. Gillo for your assistance in this matter.

Very truly yours,

DAYTON T. BROWN INC.

Laurence J. Galgano
Safety Manager

LJG:jp
Encl.

DEC 21 1983

Ref
p. 2 of 2

CONTINUED FROM THE FRONT

VII. SIC CODES (4 digits in order of priority)

A. FIRST		B. SECOND	
7397	(specify) Commercial Testing Laboratory	7392	(specify) Engineering/Consulting Service
C. THIRD		**D. FOURTH**	
	(specify)		(specify)

VIII. OPERATOR INFORMATION

A. NAME: DAYTON T BROWN INC

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify)

F. FEDERAL; M. PUBLIC (other than federal or state); S. STATE; O. OTHER (specify); P. PRIVATE

P (specify)

D. PHONE (area code & no.): 516 589 6300

E. STREET OR P.O. BOX: 555 CHUCH STREET

F. CITY OR TOWN: BOHEMIA

G. STATE: NY

H. ZIP CODE: 11716

IX. INDIAN LAND

Is the facility located on Indian lands? [ ] YES [X] NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	D. PSD (Air Emissions from Proposed Sources)
N/A	N/A
B. UIC (Underground Injection of Fluids)	**E. OTHER (specify)**
N/A	N/A (specify)
C. RCRA (Hazardous Wastes)	**F. OTHER (specify)**
N/A	N/A (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Dayton T. Brown Inc. Test and Engineering Division
Provides Environmental and Electronics Testing Services to
Both Military and Commercial Markets

XIII. CERTIFICATION (see instructions)

[illegible]

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
C. Kenneth Morrelly, Vice Pres.	C. Kenneth Morrelly	12 Dec 83

EPA Form 3510-1 (6-80) REVERSE

Reference 7

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02-8703-66-SI
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
DAYTON T. BROWN (Brown, Dayton T.)
BOHEMIA, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8703-66
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 27, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

Diane Trube
DIANE TRUBE
PROJECT MANAGER

Dennis Foerter
DENNIS FOERTER
SITE MANAGER

REVIEWED/APPROVED BY:

Charles LaBue for RN
RONALD M. NAMAN
FIT OFFICE MANAGER

CONTENTS

Section

1. Site Summary
2. Environmental Protection Agency Form 2070-13
3. Maps and Photographs
4. Conclusions and Recommendations
5. Bibliography of Information Sources
6. Background Information

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SECTION 1

SITE SUMMARY

SITE SUMMARY

Dayton T. Brown is an active site located in an industrial/commercial/residential section of Bohemia, Suffolk County, New York, in central Long Island. The facility, operating since 1960, is divided into two divisions: manufacturing, and industrial research and development. The site covers 30 acres, of which 25 acres are commercially active. There are eight buildings on site: a manufacturing building, a laboratory building, and six remote testing buildings.

Dayton T. Brown has generated a variety of wastes over the years, including plating waste, painting waste, and photo waste. These wastes are currently either removed by a licensed scavenger, or discharged to a permitted basin.

Two areas of concern at the Dayton T. Brown site include underground tanks and a recharge basin. There are four underground tanks. Tanks No. 2 and No. 3 are holding tanks, and Tanks No. 1 and No. 4 are overflow tanks. These tanks hold a combined volume of approximately 10,000-12,000 gallons. These tanks were used to hold plating waste prior to off-site disposal. At present, the tanks contain plating sludge and are possibly in unsound condition. The recharge basin is regulated by a State Pollutant Discharge Elimination System (SPDES) permit. This basin receives cooling water and photo waste. In the past, Dayton T. Brown has violated permit limits for waste parameters and concentration. There is no potential for direct contact with these waste units because the recharge basin and underground tanks are surrounded by a fence and access is controlled by security guards.

NUS Corp. Region 2 FIT performed a site inspection of the Dayton T. Brown facility on July 28, 1987. During the site inspection, one effluent, two soil, two sediment, one tap water and two sludge samples were collected. Analyses of the sludge samples taken from Tanks No. 2 and No. 3 indicate the presence of several organic and heavy metal contaminants. The only organic compound found in soil samples was bis(2-ethylhexyl)phthalate, found at a concentration of 2,300 ppb in soil sample NYR4-S1. This contaminant was also found in both sludge samples. Several heavy metal contaminants were also found in soil samples. Analyses of the tap water and effluent samples did not indicate any organic contamination. Manganese and copper were present in these samples. Many of the inorganic parameters for these samples did not meet EPA QA/QC specifications.

There is a potential for on-site contaminants to migrate into the groundwater and contaminate wells within 3 miles of the site. Contaminants were found in soil samples taken by NUS Corp. Region 2 FIT on July 28, 1987. The condition of the underground tanks is unknown.

Ref. Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9

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SECTION 2

ENVIRONMENTAL PROTECTION AGENCY FORM 2070-13

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

Ref. 7
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II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Dayton T. Brown Inc.

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: 555 Church Street

03 CITY: Bohemia

04 STATE: NY

05 ZIP CODE: 11716

06 COUNTY: Suffolk

07 COUNTY CODE: 103

08 CONG DIST.: 2

09 COORDINATES

LATITUDE: 4 0° 4 6' 1 5". N

LONGITUDE: 0 7 3° 0 6' 0 0". W

10 TYPE OF OWNERSHIP (Check one)

X A. PRIVATE
_ B. FEDERAL
_ C. STATE
_ D. COUNTY
_ E. MUNICIPAL
_ F. OTHER
_ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 7 / 28 / 87 (MONTH DAY YEAR)

02 SITE STATUS: X ACTIVE _ INACTIVE

03 YEARS OF OPERATION: 1960 (BEGINNING YEAR) / still active (ENDING YEAR) _ UNKNOWN

AGENCY PERFORMING INSPECTION (Check all that apply)

_ A. EPA
X B. EPA CONTRACTOR NUS Corp., FIT 2 (Name of firm)
_ C. MUNICIPAL
_ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
_ E. STATE
_ F. STATE CONTRACTOR _____ (Name of firm)
_ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Edward L. Leonard	Environmental Scientist	NUS Corp.	(201) 225-6160
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Claire Marcussen	Chemist	NUS Corp.	(201) 225-6160
Gerald Gilliland	Technician	NUS Corp.	(201) 225-6160
Thomas Varner	Engineer	NUS Corp.	(201) 225-6160
Dan de Bruijn	Technician	NUS Corp.	(201) 225-6160

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Robert Single	Personnel Manager	Dayton T. Brown 555 Church Street Bohemia, NY 11716	(516) 589-6300 —
Bill Schaat	Corporate Maintenance	Dayton T. Brown 555 Church Street Bohemia, NY 11716	(516) 589-6300

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
X PERMISSION _ WARRANT	0830	Sunny and hot. Air temperature 80 - 90° F. Steady wind from the north at approximately 5 mph.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Amy Brochu	U.S. EPA	(201) 906-6802

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
D. Foerter		NUS Corp., FIT 2	(201) 225-6160	10/13/89 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

Ref. 7
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II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- _ A. SOLID
- _ B. POWDER, FINES
- X C. SLUDGE
- _ D. OTHER _____ (Specify)
- X E. SLURRY
- X F. LIQUID
- _ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS 70

03 WASTE CHARACTERISTICS (Check all that apply)

- X A. TOXIC
- _ B. CORROSIVE
- _ C. RADIOACTIVE
- X D. PERSISTENT
- X E. SOLUBLE
- _ F. INFECTIOUS
- _ G. FLAMMABLE
- _ H. IGNITABLE
- _ I. HIGHLY VOLATILE
- _ J. EXPLOSIVE
- _ K. REACTIVE
- _ L. INCOMPATIBLE
- _ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown	Unknown	There are two major areas of concern: four inactive underground holding tanks, containing plating sludge; and a permitted recharge basin, receiving cooling water and photo waste.
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown	Unknown	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown	Unknown	
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	Unknown	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
Previous sampling Results.					
MES	Copper	7440-50-8	Recharge Basin	8.0	mg/L
MES	Lead	7439-92-1	Recharge Basin	0.4	mg/L
MES	Silver	7440-22-4	Recharge Basin	0.7	mg/L
SOL	1,1,1-Trichloroethane	71-55-6	Recharge Basin	8.0	ppb
SOL	Trichloroethene	79-01-6	Recharge Basin	7.8	ug/L
Sampling Results from NUS Region 2 FIT Investigation.					
OCC	4-Methyl-2-Pentanone	108-10-1	Tank, Below Ground	49	ug/kg
SOL	Tetrachloroethane	79-34-5	Tank, Below Ground	360	ug/kg
OCC	Ethylbenzene	100-41-4	Tank, Below Ground	49	ug/kg
OCC	Phenol	108-95-2	Tank, Below Ground	6,900E	ug/kg
OCC	Benzoic Acid	65-85-0	Tank, Below Ground	4,000E	ug/kg
OCC	bis (2-Ethylhexyl) phthalate	117-81-7	Tank, Below Ground*	83,000E	ug/kg
MES/SLU	Aluminum	7429-90-5	Tank, Below Ground	50,500	mg/kg
MES/SLU	Arsenic	7440-38-2	Tank, Below Ground	40.6	mg/kg
MES/SLU	Barium	7440-39-3	Tank, Below Ground	2,250	mg/kg
MES/SLU	Beryllium	7440-41-7	Tank, Below Ground	3.2	mg/kg
MES/SLU	Cadmium	7440-43-9	Tank, Below Ground	194E	mg/kg
IOC/SLU	Calcium	1317-65-3	Tank, Below Ground	12,600	mg/kg
MES/SLU	Chromium	7440-47-3	Tank, Below Ground*	43,100	mg/kg
MES/SLU	Copper	7440-50-8	Tank, Below Ground*	3,680	mg/kg
IOC/SLU	Iron	1309-37-1	Tank, Below Ground*	122,000	mg/kg
MES/SLU	Lead	7439-92-1	Tank, Below Ground	1,290E	mg/kg
MES/SLU	Manganese	7439-96-5	Tank, Below Ground*	628	mg/kg
MES/SLU	Mercury	7439-97-6	*	0.1E	mg/kg
MES/SLU	Nickel	7440-02-2	Tank, Below Ground	159E	mg/kg
MES/SLU	Selenium	7782-49-2	Tank, Below Ground	4.74E	mg/kg
MES/SLU	Silver	7440-22-4	Tank, Below Ground	29.6	mg/kg
MES/SLU	Sodium	7440-23-5	Effluent**	10,600	ug/l
MES/SLU	Vanadium	1314-62-1	Tank, Below Ground	646	mg/kg
MES/SLU	Zinc	7440-66-6	Tank, Below Ground	99,000	mg/kg
IOC/SLU	Cyanide	151-50-8	Tank, Below Ground	45.2	mg/kg

E=estimated value
* Found in surface soil
** found in tap water

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Toluene	108-88-3	FDS		
FDS	Methyl ethyl ketone	78-93-3	FDS		
FDS			FDS		
FDS			FDS		

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

VI. SOURCES OF INFORMATION (See specific references. e.g., state files, sample analysis, reports) (con't)

Background Files, Suffolk County Department of Health Services (SCDHS), Suffolk County, New York.
Preliminary Assessment, U.S. Environmental Protection Agency, October 17, 1989.
Letter from D.C. Gobbi, Bureau of Environmental Pollution Control, to A. Donato, Dayton T. Brown, December 2, 1985.
Trace Organic Analysis of Industrial Waste, Dayton T. Brown, Inc., January 25, 1984.
Letter from D.C. Gobbi, Bureau of Environmental Pollution Control, to R. Single, Dayton T. Brown, Inc., February 21, 1984.
Field Logbook No. 0115, Dayton T. Brown, TDD No. 02-8703-66, Site Inspection, NUS Region 2 FIT, Edison, New Jersey, July 28, 1987.
U.S. EPA Contract Laboratory Program, Alliance Technologies, Century Refiniry Co., Hittman Ebasco Assoc. Inc., Chemtech Consulting Group, Case No. 7765/3181 B, Laboratory Analysis from NUS Corporation, Region 2 FIT Site Inspection conducted on July 28, 1987.
Telecon Note: Conversation between R. Single, Dayton T. Brown, and Ed Leonard, NUS Corp., August 27, 1987.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION — 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for groundwater contamination via the possibly leaking underground storage tanks and the discharges, which exceeded permit levels, to the recharge basin. Analysis of the sludge in the underground storage tanks indicate the presence of several organic and heavy metal contaminants.

01 B. SURFACE WATER CONTAMINATION — 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for surface water contamination does not exist. There are no drainage routes from the site to the nearest body of water.

01 C. CONTAMINATION OF AIR — 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for air contamination does not exist. Waste storage and disposal facilities are located below ground. No air monitoring readings were detected above background in the ambient air.

01 D. FIRE/EXPLOSIVE CONDITIONS — 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Field observations did not indicate the potential for significant fire/explosive conditions on site.

01 E. DIRECT CONTACT — 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for direct contact does not exist. Areas of contamination are entirely fenced.

01 X F. CONTAMINATION OF SOIL — 02 X OBSERVED (DATE: 7/28/87) _ POTENTIAL _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (ACRES) — 04 NARRATIVE DESCRIPTION

Analysis of soil sample NYR4-S1 indicated the presence at bis (2-Ethylhexyl) Phthalate at a concentration of 2,300 ppb.

01 X G. DRINKING WATER CONTAMINATION — 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for drinking water contamination via the underground holding tanks and the recharge basin. Suffolk County drinking water is entirely supplied by groundwater.

01 H. WORKER EXPOSURE/INJURY — 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for worker exposure/injury does not exist. Areas of contamination are entirely fenced.

01 X I. POPULATION EXPOSURE/INJURY — 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for population exposure to possibly contaminated drinking water.

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 J. DAMAGE TO FLORA — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for damage to flora does not exist. The site is located in a densely populated industrial/commercial area.

01 K. DAMAGE TO FAUNA — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

The potential for damage to fauna does not exist. The site is located in a densely populated industrial/commercial area.

01 L. CONTAMINATION OF FOOD CHAIN — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for food chain contamination does not exist. The site is located in a densely populated industrial/commerical area.

01 X M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 X OBSERVED (DATE: 1/25/84) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 5,342 — 04 NARRATIVE DESCRIPTION

There are two areas of unstable waste containment: the recharge basin, which receives effluent discharge in violation of SPDES permit limits and parameters; and the possibly unsound underground holding tanks, which store waste. Population potentially affected within a 1-mile radius is approximately 5,342 people.

01 X N. DAMAGE TO OFFSITE PROPERTY — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists for off-site property damage via contamination of wells.

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is no known contamination of sewers, storm drains, or WWTP's.

01 X P. ILLEGAL/UNAUTHORIZED DUMPING — 02 X OBSERVED (DATE: 1/25/84) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

Analysis of the effluent entering the recharge basin by the Suffolk County Department of Health Services has demonstrated violations of SPDES permit limits and parameters.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

There are no other known, potential or alleged hazard.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 200,000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Field Logbook No. 0115, Dayton T. Brown, TDD No. 02-8703-66, Site Inspection, NUS Region 2 FIT, Edison, New Jersey, July 28, 1987.
U.S. EPA Contract Laboratory Program, Alliance Technologies, Century Refining Co., Hittman Ebasco Assoc. Inc., Chemtech Consulting Group, Case No. 7765/3181B, Laboratory Analysis from NUS Corporation, Region 2 FIT Site Inspection Conducted on July 28, 1987.
Trace Organic Analysis of Industrial Waste, Dayton T. Brown, Inc., January 25, 1984.
Letter from D.C. Gobbi, Bureau of Environmental Pollution Control, to R. Single, Dayton T. Brown, Inc., February 21, 1984.
General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS), Landover, Maryland, 1986.
Letter from Diane Trube, NUS Corp., to Mr. Pat Dugan, Suffolk County Water Authority, March 25, 1987.
U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 Minute Series, "Patchogue Quadrangle, New York", 1967. "Central Islip Quadrangle, New York", 1967, revised 1979. "Bayshore Quadrangle, New York", 1969.

Ref. 7
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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
_ A. NPDES				
_ B. UIC				
_ C. AIR				
_ D. RCRA				
_ E. RCRA INTERIM STATUS				
_ F. SPCC PLAN				
X G. STATE (Specify) SPDES	NY0075809	6/1/85	6/1/90	In the past, Dayton T. Brown has violated this permit for waste parameters and concentration.
_ H. LOCAL (Specify)				
_ I. OTHER (Specify)				
_ J. NONE				

III. SITE DESCRIPTION

01 Storage/Disposal (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
X A. SURFACE IMPOUNDMENT	54,036	cubic feet	_ A. INCINERATION	X A. BUILDINGS ON SITE
_ B. PILES			_ B. UNDERGROUND INJECTION	
_ C. DRUMS, ABOVE GROUND			_ C. CHEMICAL/PHYSICAL	
_ D. TANK, ABOVE GROUND			_ D. BIOLOGICAL	06 AREA OF SITE
X E. TANK, BELOW GROUND	10,000	gallons	_ E. WASTE OIL PROCESSING	
_ F. LANDFILL			_ F. SOLVENT RECOVERY	
_ G. LANDFARM			_ G. OTHER RECYCLING/RECOVERY	30 (Acres)
_ H. OPEN DUMP			_ H. OTHER (Specify)	
_ I. OTHER (Specify)				

07 COMMENTS

The surface impoundment is a SPDES-permitted recharge basin receiving cooling water and photo waste from the laboratory building. The four underground concrete tanks were used for holding plating waste. At present the tanks are not used, but contain some plating sludge.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

_ A. ADEQUATE, SECURE _ B. MODERATE X C. INADEQUATE, POOR _ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The underground tanks are in unknown condition, with no liner or leak containment system.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: _ YES X NO

02 COMMENTS The underground tanks and the recharge basin are entirely fenced and of limited access to the public and employees.

VI SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Field Logbook No. 0115, Dayton T. Brown, TDD No. 02-8703-66, Site Inspection, NUS Region 2 FIT, Edison, New Jersey, July 28, 1989.
Telecon Note: Conversation between R. Single, Dayton T. Brown, and Ed Leonard, NUS Corp., August 27, 1987.
State Pollutant Discharge Elimination System Permit No. 0075809, June 1, 1985.
Telecon Note: Conversation between A. Speiser, LKB Assoc., and Ed Leonard, NUS Corp., January 20, 1989.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable) — 02 STATUS — 03 DISTANCE TO SITE

	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	
COMMUNITY	A. _	B. X	A. _	B. unknown	C. _	A. 0.07 (mi)
NON-COMMUNITY	C. _	D. _	D. _	E. _	F. _	B. _ (mi)

* see section II, 09 below

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

X A. ONLY SOURCE FOR DRINKING
_ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)
_ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
_ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER: 200,000
03 DISTANCE TO NEAREST DRINKING WATER WELL: 0.07 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
20 (ft)	Southwest	20 (ft)	Unknown (gpd)	X YES _ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

There are nine wells within the 3-mile radius of the site, serving approximately 200,000 people. The wells range in depth from 83 feet to 838 feet. Approximately half the wells are screened in the Glacial Aquifer and half in the Magothy Aquifer. The three nearest wells are located approximately 400 feet southeast of the site, on Church Street. The two shallow wells are screened at 156 feet and 158 feet in the Glacial Aquifer. Both wells are out of service, due to organic contamination. However, these closures were not directly attributable to the Dayton T. Brown facility. The deeper well is screened at 838 feet in the Magothy Aquifer.

10 RECHARGE AREA
X YES
_ NO
COMMENTS Aquifers are recharged directly by rainwater infiltration.

11. DISCHARGE AREA
_ YES
X NO
COMMENTS _

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

_ A. RESERVOIR, RECREATION DRINKING WATER SOURCE
_ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
_ C. COMMERCIAL, INDUSTRIAL
X D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
None		(mi)
		(mi)
		(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5,300 NO. OF PERSONS	B. 27,000 NO. OF PERSONS	C. 57,700 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.01 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 8,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 0.002 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site. e.g., rural, village, densely populated urban area)

The site is located within the village of Bohemia at the eastern end of Islip Township. It is a densely populated industrial/commercial/residential area.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

_ A. 10^{-6} - 10^{-8} cm/sec _ B. 10^{-4} - 10^{-6} cm/sec _ C. 10^{-4} - 10^{-3} cm/sec X D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

X A. IMPERMEABLE (Less than 10^{-6} cm/sec) _ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) _ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) _ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK: 1,650 (ft)
04 DEPTH OF CONTAMINATED SOIL ZONE: 14 (ft)
05 SOIL pH: Unknown

06 NET PRECIPITATION: 14 (in)
07 ONE YEAR 24 HOUR RAINFALL: 2.5 (in)
08 SLOPE
SITE SLOPE: 1 %
DIRECTION OF SITE SLOPE: Southeast
TERRAIN AVERAGE SLOPE: 1 %

09 FLOOD POTENTIAL
SITE IS IN 500 YEAR FLOODPLAIN 10 _ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. 2.0 (mi)
OTHER: B. 1.0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
none within 3 miles (mi)
ENDANGERED SPECIES: Not Applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL: A. 0.0 (mi)
RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES: B. 0.01 (mi)
AGRICULTURAL LANDS
PRIME AG LAND: C. Unknown (mi)
AG LAND: D. Unknown (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site property is relatively level, at an elevation of approximately 45-50 feet above mean sea level. Regional slope of the terrain is southerly. The site is located within an industrial/commercial complex, directly south of MacArthur Airport.

VII SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Application Form "C" for a State Pollutant Discharge Elimination System (SPDES) Permit, Dayton T. Brown, Inc. (undated).
Telecon Note: Conversation between Pat Dugan, Suffolk County Water Authority, and Diane Trube, NUS Corp., March 24, 1987.
General Sciences Corporation, Graphical Exposure Modeling Systems (GEMS), Landover Maryland, 1986.
Response to letter from Diane Trube, NUS Corp., to Mr. Pat Dugan, Suffolk County Water Authority, March 25, 1987.
Soren J., Results of Subsurface Exploration in the Mid-Island Area of Western Suffolk County, Long Island, New York, 1971.
Uncontrolled hazardous waste site ranking system, A user's manual, 40 CFR, Part 300, Appendix a, 1986.
Atlantic Coast Ecological Inventory, U.S. Department of the Interior, Fish and Wildlife Service, 1980.
U.S. Department of the Interior, Geological Survey Topographic Map, 7.5 Minute Series, "Patchogue Quadrangle, New York," 1967, "Central Islip Quadrangle, New York", 1967, revised 1979, "Bayshore Quadrangle, New York", 1969, revised 1979, Sayville Quadrangle, New York", 1967.
Telecon Note: Conversation between R. Single, Dayton T. Brown, and Ed Leonard, NUS Corp., July 21, 1987.
U.S. Department of Housing and Urban Development, Flood Insurance Rate Map (FIRM), Town of Islip, Suffolk County, New York, Panel 10, July 18, 1983.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	1	Organic Labs: Alliance Technologies, 213 Burlington Road, Bedford, MA 01730	12/12/87*
SURFACE WATER			
WASTE Sludge	2	Century Refining Co., 695 North Seventh Street, Brighton, CO. 80601	
Effluent	1		
AIR			
RUNOFF		Inorganic Labs: Hittman Ebasco Assoc. Inc., 9151 Rumsey Road, Columbia, MD 21045	1/12/88*
SPILL			
SOIL	2	Chemtech Consulting Group, 360 West 11th Street, New York, NY 10014	2/24/88*
VEGETATION			
OTHER Sediment	2		

* Dates on which NUS Corp. received data.

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Monitoring	No readings above ambient conditions were detected on the OVA flame ionization detector or the HNu photoionization detector. Elevated readings were detected in underground holding tank No. 3 on the OVA.
Dimensions	Approximate measurements were obtained for the swale and recharge basin. The depth was obtained for each underground holding tank.

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND X AERIAL

02 IN CUSTODY OF NUS Corp., Region 2 FIT
(Name of organization or individual)

03 MAPS X YES _ NO

04 LOCATION OF MAPS NUS Corp., Region 2 FIT, Edison NJ

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field notebook No. 0115. Filed under TDD No. 02-8703-66.

VI. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Field Logbook No. 0115, Dayton T. Brown, TDD No. 02-8703-66, Site Inspection, NUS Region 2 FIT, Edison, New Jersey, July 28, 1987.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. CURRENT OWNER(S)

01 NAME	02 D + B NUMBER	08 NAME (PARENT COMPANY (If applicable))	09 D + B NUMBER
Dayton T. Brown, Inc.			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
555 Church Street			
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
Bohemia / NY	11716		

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D + B NUMBER
J.M. Greene	
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
Great River Road	
05 CITY / 06 STATE	07 ZIP CODE
Great River / NY	

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Telecon Note: Conversation between office clerk, Assessor's Office-Islip, and Ed Leonard NUS Corp., July 23, 1987.
Telecon Note: Conversation between office clerk, Suffolk County Clerk's Office, and Ed Leonard, NUS Corp., July 23, 1989.

Ref. 7
P-160837

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. CURRENT OPERATOR(S) | **OPERATOR'S PARENT COMPANY (If applicable)**

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
Dayton T. Brown, Inc.			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	**04 SIC CODE**	**12 STREET ADDRESS (P.O. Box, RFD#, etc.)**	**13 SIC CODE**
555 Church Street			
05 CITY / **06 STATE**	**07 ZIP CODE**	**14 CITY** / **15 STATE**	**16 ZIP CODE**
Bohemia / NY	11716		
08 YEARS OF OPERATION / **09 NAME OF OWNER**			
29			

III. PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner) | **PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)**

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	**04 SIC CODE**	**12 STREET ADDRESS (P.O. Box, RFD#, etc.)**	**13 SIC CODE**
05 CITY / **06 STATE**	**07 ZIP CODE**	**14 CITY** / **15 STATE**	**16 ZIP CODE**
08 YEARS OF OPERATION / **09 NAME OF OWNER**			

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	**04 SIC CODE**	**12 STREET ADDRESS (P.O. Box, RFD#, etc.)**	**13 SIC CODE**
05 CITY / **06 STATE**	**07 ZIP CODE**	**14 CITY** / **15 STATE**	**16 ZIP CODE**
08 YEARS OF OPERATION / **09 NAME OF OWNER**			

01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	**04 SIC CODE**	**12 STREET ADDRESS (P.O. Box, RFD#, etc.)**	**13 SIC CODE**
05 CITY / **06 STATE**	**07 ZIP CODE**	**14 CITY** / **15 STATE**	**16 ZIP CODE**
08 YEARS OF OPERATION / **09 NAME OF OWNER**			

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Preliminary Assessment, U.S. Environmental Protection Agency, October 17, 1986.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II ON-SITE GENERATOR

01 NAME		02 D + B NUMBER
Dayton T. Brown, Inc.		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
555 Church Street		
05 CITY	06 STATE	07 ZIP CODE
Bohemia	NY	11716

III OFF-SITE GENERATOR(S)

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Preliminary Assessment, U.S. Environmental Protection Agency, October 17, 1986.

II. PAST RESPONSE ACTIVITIES

01 A. WATER SUPPLY CLOSED — 02 DATE: unknown — 03 AGENCY: unknown
04 DESCRIPTION

Two shallow wells located on Church Street have been closed due to organic contamination. However, these closures were not directly attributable to the Dayton T. Brown facility.

01 B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 D. SPILLED MATERIAL REMOVED — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 E. CONTAMINATED SOIL REMOVED — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 F. WASTE REPACKAGED — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 G. WASTE DISPOSED ELSEWHERE — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history as a response action; however wastes were routinely disposed of off-site.

01 H. ON SITE BURIAL — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history

01 I. IN SITU CHEMICAL TREATMENT — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 J. IN SITU BIOLOGICAL TREATMENT — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 K. IN SITU PHYSICAL TREATMENT — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 L. ENCAPSULATION — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 M. EMERGENCY WASTE TREATMENT — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 N. CUTOFF WALLS — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 P. CUTOFF TRENCHES/SUMP — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

01 Q. SUBSURFACE CUTOFF WALL — 02 DATE: — 03 AGENCY:
04 DESCRIPTION

No previous history.

Ref. 019 of 57

II. PAST RESPONSE ACTIVITIES

01 R. BARRIER WALLS CONSTRUCTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 S. CAPPING/COVERING 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 T. BULK TANKAGE REPAIRED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 U. GROUT CURTAIN CONSTRUCTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 V. BOTTOM SEALED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 W. GAS CONTROL 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 X. FIRE CONTROL 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 Y. LEACHATE TREATMENT 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 Z. AREA EVACUATED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 1. ACCESS TO SITE RESTRICTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 2. POPULATION RELOCATED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 3. OTHER REMEDIAL ACTIVITIES 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Application Form "C" for a State Pollutant Discharge Elimination System (SPDES) Permit, Dayton T. Brown, Inc., (undated).

Background Files, NUS Corporation, Region 2 FIT, Edison, New Jersey.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION X YES _ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

5/6/87 Consent Order (No. 1-1373) filed by NYSDEC.
This order required Dayton T. Brown to comply with state air emission regulations (Part 228, Title 6, NYCRR) and to submit quarterly progress reports summarizing actions and/or efforts taken.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, report)

Order of Consent, from State of New York, Department at Conservation, to Dayton T. Brown, May 6, 1985.

Ref. 7
p. 21 of 37

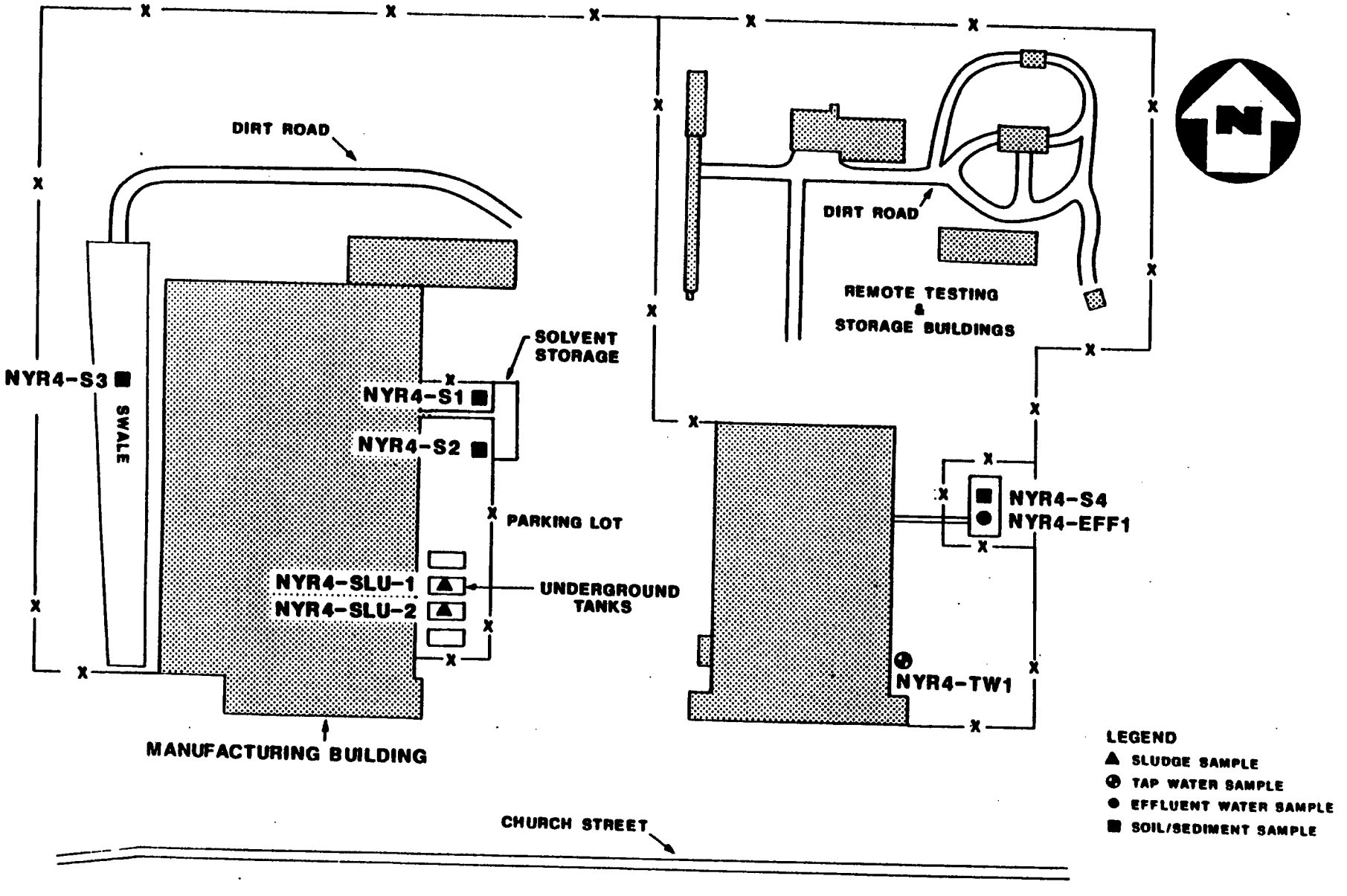
SECTION 3

MAPS AND PHOTOGRAPHS

DAYTON T. BROWN
BOHEMIA, NEW YORK

CONTENTS

Figure 1: Site Location Map
Figure 2: Sample Location Map
Exhibit A: Photographic Log



SAMPLE LOCATION MAP

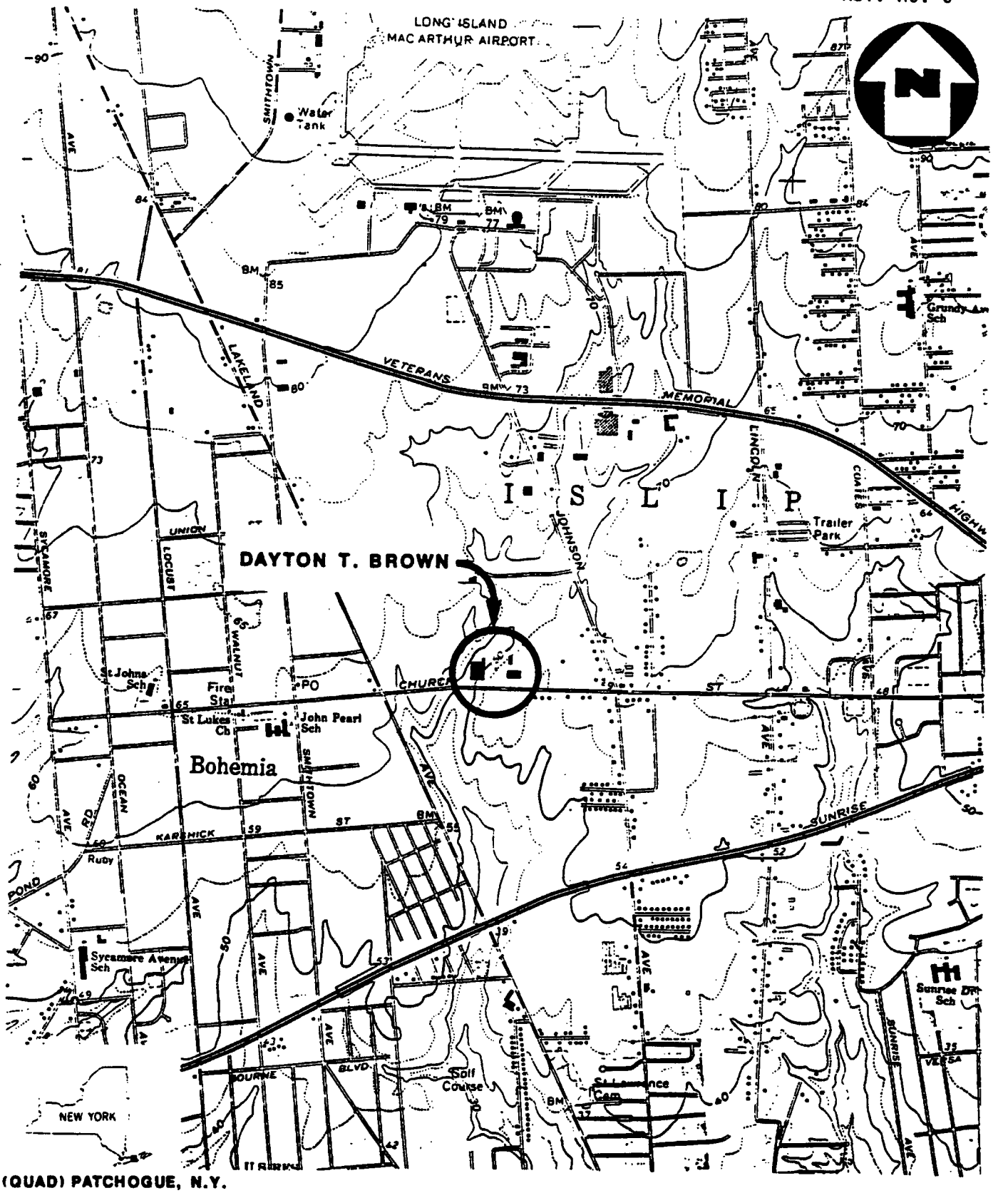
DAYTON T. BROWN, BOHEMIA, N.Y.

(NOT TO SCALE)

FIGURE 2

NUS CORPORATION

02-8703-66-SI
Rev. No. 0



(QUAD) PATCHOGUE, N.Y.

FIGURE 1

SITE LOCATION MAP

DAYTON T. BROWN, BOHEMIA, N.Y.

SCALE: 1" = 2000'

NUS CORPORATION
A Halliburton Company

EXHIBIT A

PHOTOGRAPHIC LOG

DAYTON T. BROWN
BOHEMIA, NEW YORK

SITE INSPECTION: JULY 28, 1987

DAYTON T. BROWN
BOHEMIA, NEW YORK
JULY 28, 1987

PHOTOGRAPHIC INDEX

ALL PHOTOGRAPHS TAKEN BY EDWARD LEONARD

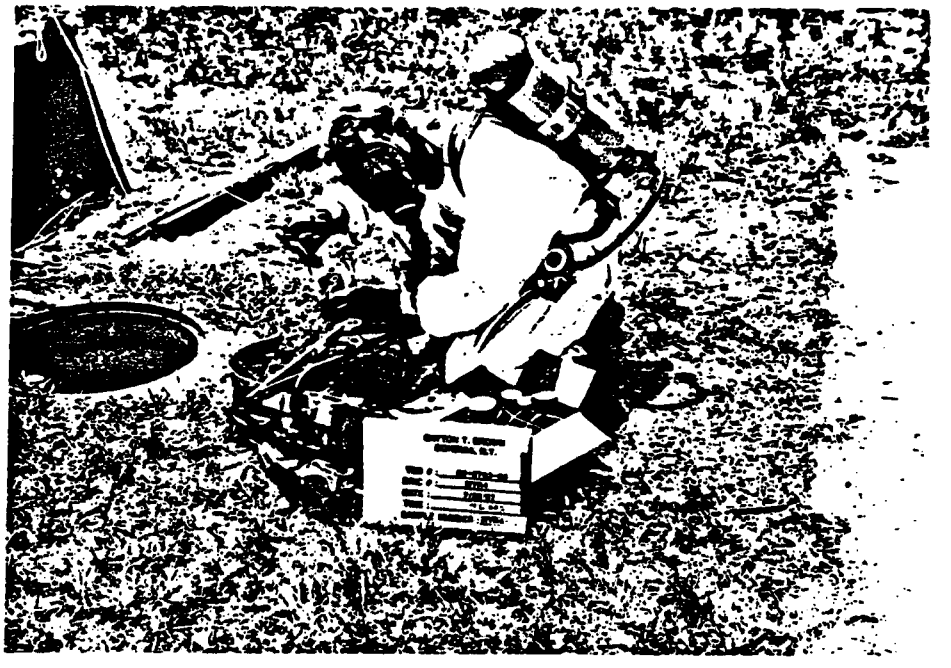
Photo Number	Description	Time
1P-1	T. Varner collecting sample S-1.	1030
1P-2	T. Varner collecting sample S-2.	1048
1P-3	D. Debruijn collecting sample SLU-1.	1146
1P-4	D. Debruijn collecting sample SLU-2.	1215
1P-5	T. Varner collecting sample S-3.	1303
1P-6	Looking south at swale by MFG. building.	1320
1P-7	D. Debruijn collecting sample S-4.	1340
1P-8	D. Debruijn collecting sample EFF-1.	1346
1P-9	View of recharge basin by lab building.	1352
1P-10	View of recharge basin by lab building.	1356
1P-11	D. Debruijn collecting sample TW-1 from well No. 3.	1411
1P-12	Site sign by parking lot.	1508
1P-13	Site sign on MFG. building.	1513

DAYTON T. BROWN, BOHEMIA, NEW YORK

1P-1 July 28, 1987 1030
T. Varner collecting sample S-1.

1P-2 July 28, 1987 1048
T. Varner collecting sample S-2.

DAYTON T. BROWN, BOHEMIA, NEW YORK



1P-3 July 28, 1987 1146

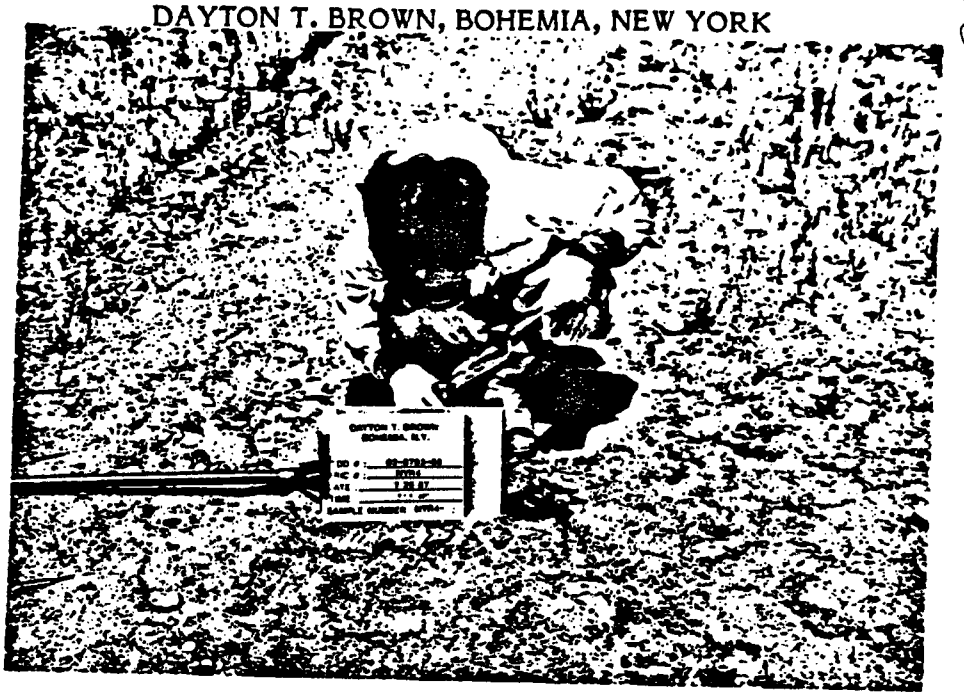
D. Debruijn collecting sample SLU-1.

1P-4 July 28, 1987 1215

D. Debruijn collecting sample SLU-2.

Ref. 7
p. 29 of 37

DAYTON T. BROWN, BOHEMIA, NEW YORK



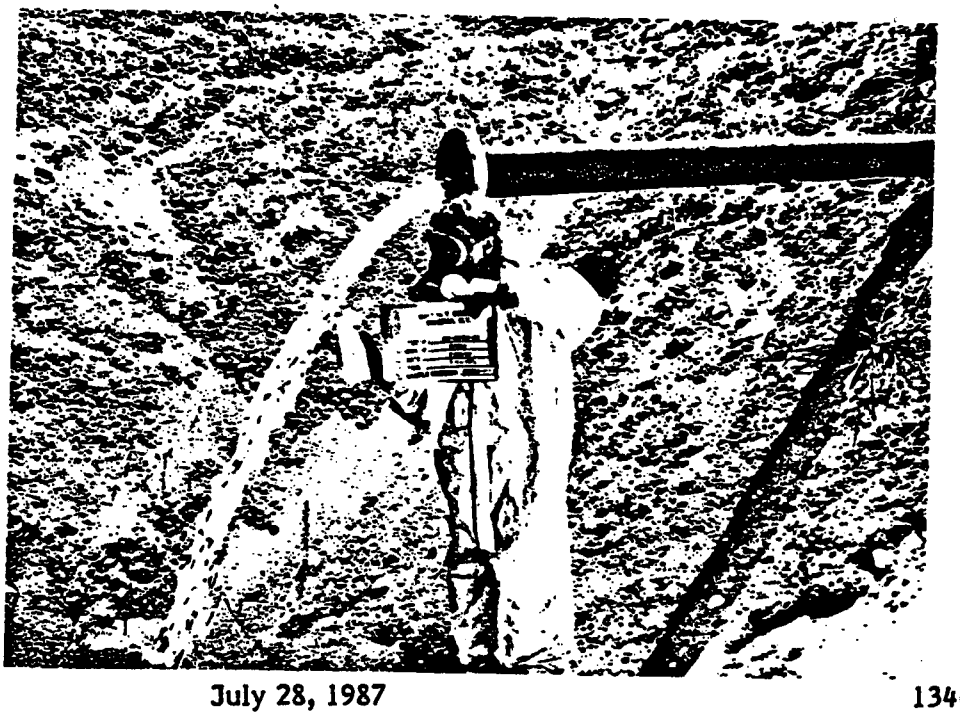
1P-5 July 28, 1987 1303
T. Varner collecting sample S-3.

1P-6 July 28, 1987 1320
Looking south at swale by MFG. Building.

DAYTON T. BROWN, BOHEMIA, NEW YORK

1P-7 July 28, 1987 1340

D. Debruijn collecting sample S-4.

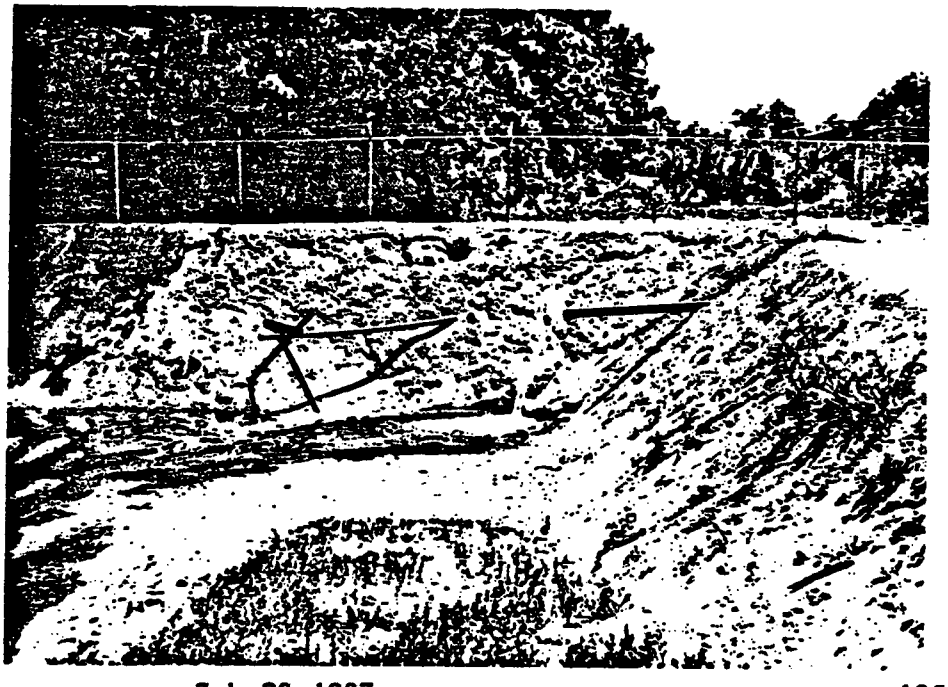


1P-8 July 28, 1987 1346

D. Debruijn collecting sample EFF-1.

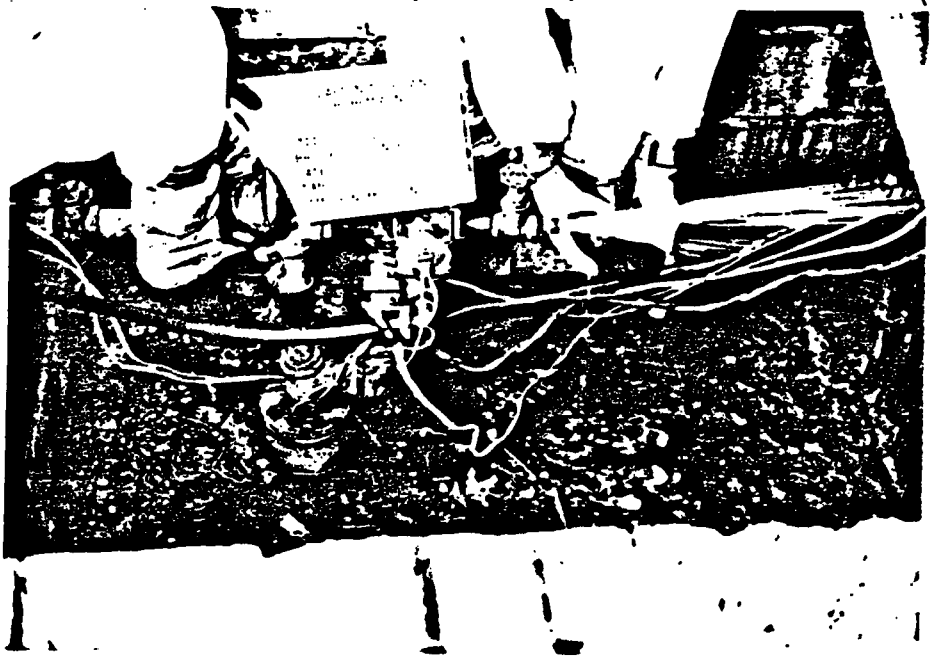
DAYTON T. BROWN, BOHEMIA, NEW YORK

1P-9 July 28, 1987 1352
View of recharge basin by lab building, looking north.



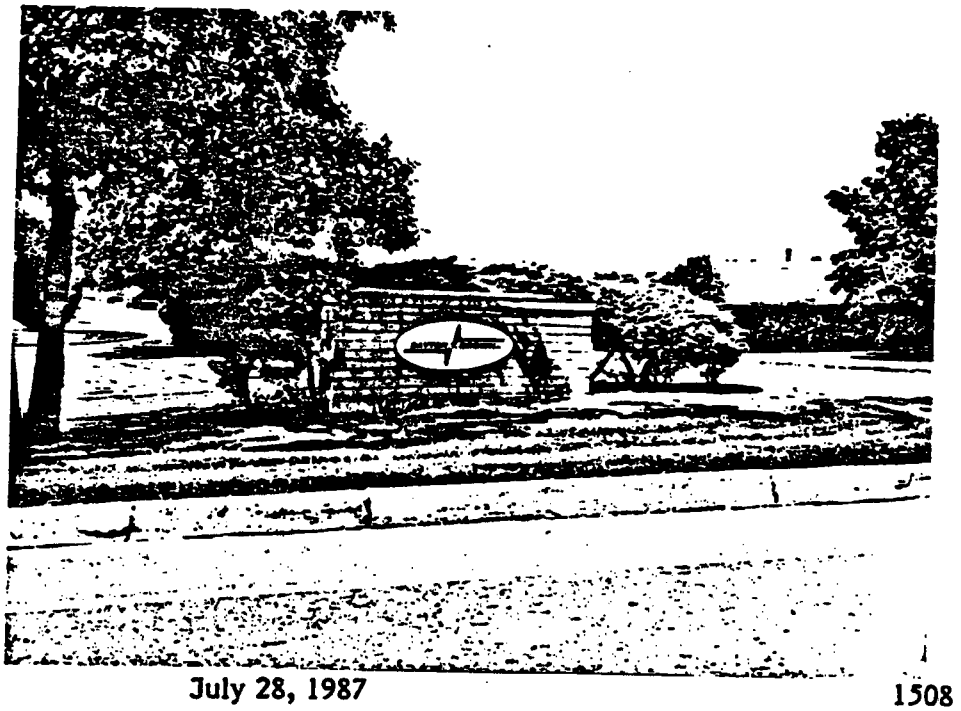
1P-10 July 28, 1987 1356
View of recharge basin by lab building, looking south.

DAYTON T. BROWN, BOHEMIA, NEW YORK



1P-11 July 28, 1987 1411

D. Debruijn collecting sample TW-1 from well #3.



1P-12 July 28, 1987 1508

Site sign by parking lot.

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DAYTON T. BROWN, BOHEMIA, NEW YORK

1P-13 July 28, 1987 1513

Site sign on MFG. Building.

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SECTION 4

CONCLUSIONS AND RECOMMENDATIONS

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4.0 CONCLUSIONS AND RECOMMENDATIONS

The site is recommended for a Listing Site Inspection. This recommendation is based on the potential for on-site contaminants to migrate to groundwater, which serves a population of approximately 200,000 people. Analytical results of soil samples taken by NUS Corp. Region 2 FIT indicate the presence of organic and heavy metal contaminants. A majority of the heavy metals found in these soil samples were also found in sludge samples taken from Tanks No. 2 and No. 3, which are located west of the manufacturing building. There is also a question as to the soundness of the underground tanks. Dayton T. Brown officals have said that the tanks were not leak tested and that the tanks had no pollution control devices.

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SECTION 5

BIBLIOGRAPHY OF INFORMATION SOURCES

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9. Telecon Note: Conversation between Pat Dugan, Suffolk County Water Authority, and Diane Trube, NUS Corp., March 24, 1987.

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Reference 8

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GROUNDWATER TECHNOLOGY

Groundwater Technology, Inc.
101-3 Colin Drive, Holbrook, NY 11741
Tel: (516) 472-4000 Fax: (516) 472-4077

SUMMARY OF MONITORING WELL INSTALLATION PROGRAM

DAYTON T. BROWN FACILITY

555 CHURCH STREET

BOHEMIA, NEW YORK

August 10, 1992

Prepared for:

Mr. Robert Single
Dayton T. Brown
555 Church Street
Bohemia, New York

Groundwater Technology, Inc.
Written/Submitted by

Tim Douthit
Geologist

Groundwater Technology, Inc.
Reviewed/Approved by

Kenneth L. Brooks, P.E.
Project Manager

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1.2 SCOPE OF WORK 1

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APPENDIX C	WATER TABLE ELEVATION MAP AND LIQUID LEVEL SUMMARY
APPENDIX D	SUMMARY OF SOIL ANALYTICAL RESULTS
APPENDIX E	SOIL ANALYSES LAB REPORTS
APPENDIX F	SUMMARY OF WATER ANALYTICAL RESULTS
APPENDIX G	WATER ANALYSES LAB REPORTS

1.0 INTRODUCTION

1.1 SITE LOCATION AND BACKGROUND

The site is located on the north side of Church Street between Johnson and Lakeland Avenues, Bohemia, New York. The site consists of two large and four smaller facility buildings with a large parking area. Adjacent land uses are an industrial park to the north extending to Veterans Memorial Highway, a precast cement plant to the east, residential areas to the south and commercial property to the west. A Suffolk County Water Authority supply well field is located approximately one quarter mile to the southeast of the site. A site plan is presented in Appendix A.

The groundwater at the site is designated as a sole source aquifer and is classified by the New York State Department of Environmental Conservation (NYSDEC) as Class GA (potable water supply). Class GA groundwater standards for benzene, toluene, ethylbenzene and total xylenes are 0.7 parts per billion (ppb), 5 ppb, 5 ppb and 5 ppb, respectively, with no more than 100 ppb combined total volatile organic compounds (VOC's).

On March 7, 1991, contaminated liquids and sludge were removed from two industrial leaching pools located on the east side of the manufacturing division and corporate administration building. Based upon the analysis of samples taken from the base of the subject drywells, the Suffolk County Department of Health Services (SCDHS) requested that a work plan be submitted to the SCDHS with recommendations for soil excavation, soil borings, installation of monitoring wells and laboratory analysis using EPA methods 601/602.

On the recommendation of Groundwater Technology, Inc. a work scope was adopted that would document the existence or lack of soil and groundwater contamination. These findings would provide a sound basis on which to determine whether further drywell excavation would be required.

1.2 SCOPE OF WORK

Groundwater Technology, Inc. was contracted to install four monitoring wells at the above referenced site. One well (MW-2) was installed in close proximity to the subject drywells, while the three other monitoring wells were installed upgradient (MW-1), downgradient (MW-3) and between the subject drywells and the Suffolk County Water Authority supply well field (MW-4). MW-4 was installed to measure any potential drawdown effects due to the SCWA well field, and to intercept any potential contaminant plume in the direction of the SCWA well field. Soil samples were collected during the installation of MW-2, and water samples were obtained from all wells subsequent to their installation and development. The soil and water samples were submitted for laboratory analyses to ascertain the nature and extent of subsurface contamination at the site, if any.

2.0 SUMMARY OF MONITORING WELL INSTALLATION

2.1 METHODOLOGY

Monitoring wells were installed on June 29 and June 30, 1992, using a hollow stem auger rig. In order to avoid underground utilities and other potential drilling obstructions, hand digging was performed to a depth of three feet below grade. Drilling was conducted to a depth of approximately 10 feet below the water table, or 30 feet below grade. The screened interval of each well was from 15 to 30 feet below grade, and consisted of four inch diameter, 0.02 inch slotted PVC pipe. Above the screened interval, the wells consist of four inch diameter PVC casing to grade. The borehole annulus surrounding the well screen was filled with Morie #2 filter gravel to two feet above the screen, and sealed with bentonite. Above this level, the wells were grouted to grade and finished with either a roadbox-type manhole cover (MW-2, MW-3, and MW-4) or a stand pipe (MW-1). Well logs are presented in Appendix B.

Soil samples were obtained from MW-2 on five foot intervals using a split-spoon sampler. Soil samples were field screened using a Photovac Microtip® photoionization detector (PID). Four samples from 9-11 (SS2), 14-16 (SS3), 19-21 (SS4) and 24-26 (SS5) feet below grade were retained and submitted for laboratory analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA method 8020, halogenated volatile organics by EPA method 8010, and priority pollutant metals by EPA methods 6010, 7060, 245.5 and 7740. Analyses were performed by GTEL Environmental Laboratories, Milford, N.H.

Following their installation, the monitoring wells were developed to insure proper communication between the wells and the surrounding aquifer. Well development was achieved through pumping water from the wells until no suspended fine sediments were apparent. Typically, this amounted to approximately six well volumes (~50 gallons). Water samples were collected from all wells on July 9, 1992, and submitted for laboratory analysis of BTEX by EPA method 602, and of purgeable halocarbons by EPA method 601. Water analyses were also performed by GTEL Environmental Laboratories.

2.2 WELL GAUGING

Monitoring wells were surveyed on July 1, and gauged on July 1 and July 9, 1992. The average water table elevation for this period is 82.42 feet, based upon an arbitrary fixed on-site datum of 100 feet taken at the rim of a manhole west of MW-4. Well gauging indicates that groundwater flow is due south across the site. A water table elevation map, illustrating these conditions, is presented in Appendix C.

2.3 SOIL ANALYTICAL RESULTS

All soil samples from MW-2 were below method detection limits for BTEX (EPA method 8020) except for SS5, which was taken from 24 to 26 feet below grade. SS5 contained ethylbenzene and xylene in concentrations of 1.1 and 7.7 parts per billion (ppb), respectively. As a comparison, the New York State Department of Environmental Conservation (NYSDEC) proposed soil guidance values are 37.5 and 30.0 ppb for these two constituents, respectively. However, it should be noted that SS5 was taken below the water table, and therefore the contribution of BTEX to this soil sample from groundwater cannot be discounted. All submitted soil samples from MW-2 were below method detection limits for the halogenated volatile organics (EPA method 8010). Analysis of priority pollutant metals yielded detectable concentrations of chromium and zinc in all MW-2 soil samples and copper in the sample from 9 to 11 feet below grade (SS2). The chromium values ranged from 1.9 parts per million (ppm) in SS3 to 6.0 ppm in SS4. Zinc concentrations increased steadily with depth from 4.4 ppm in SS2 to 39 ppm in SS5. The concentration of

copper detected in SS2 was 2.6 ppm. Soil analytical results are summarized in Appendix D, and laboratory reports are presented in Appendix E.

2.4 WATER ANALYTICAL RESULTS

Laboratory analysis of water samples from monitoring wells 1 through 4 yielded BTEX concentrations below detection limits for all wells except MW-2, which is located adjacent to the subject drywells. MW-2 contained 20 parts per billion (ppb) ethylbenzene and 37 ppb xylenes. These values exceed the NYSDEC standards for ethylbenzene and total xylenes in Class GA potable groundwaters. However, since MW-4, located between the subject drywells and the SWCA supply well field, yielded no detectable concentrations of BTEX, and due to the very low concentrations of ethylbenzene and xylene in well MW-2, it is considered highly unlikely that any potential contamination from the subject drywells is influencing the water quality at the SWCA well field. None of the monitoring wells contains purgeable halocarbons in concentrations above method detection limits. Water analytical results are summarized in Appendix F, and laboratory reports are presented in Appendix G.

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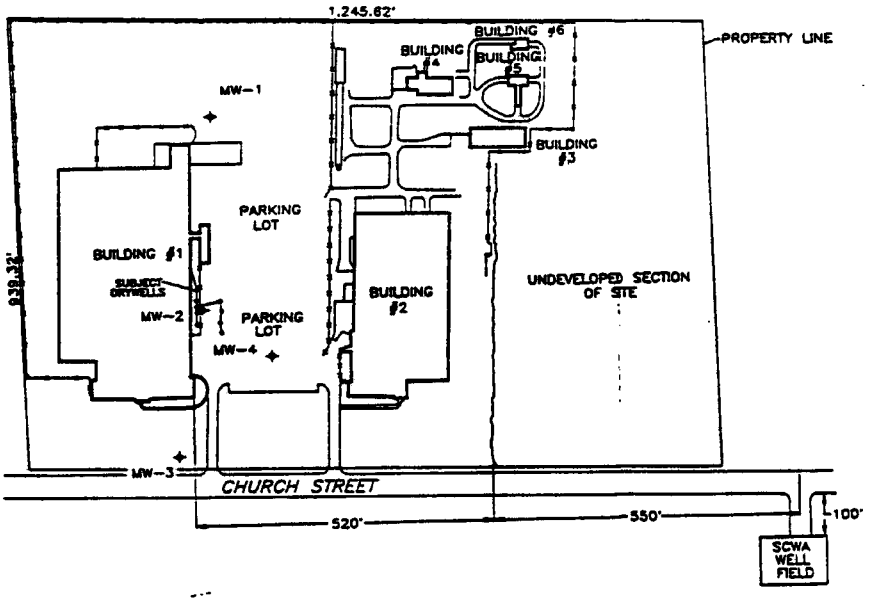

LEGEND

- MONITORING WELL
- DRY WELL
- UST UNDERGROUND STORAGE TANK
- FENCE

NOTES: LOCATIONING DIMENSIONS AND SCALE ARE APPROXIMATE FOR SCWA WELL FIELD.

SOURCE:

0 30 60
SCALE FEET

N

GROUNDWATER TECHNOLOGY
101-3 COLIN DRIVE
HOLBROOK, N.Y. 11741
(516) 472-4000

REV. NO.:	DRAWING DATE: 6/7/92	ACAD FILE: 5050-STN

SITE PLAN

CLIENT: DAYTON T. BROWN	PM:
LOCATION: CHURCH STREET BOHEMIA, NEW YORK	PE/RG:
DESIGNED: / DETAILED: TRS	PROJECT NO.: 01113-5050 / FIGURE: 1

THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF GROUNDWATER TECHNOLOGY, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF GROUNDWATER TECHNOLOGY, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED

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LIQUID LEVEL SUMMARY
DAYTON T. BROWN
555 CHURCH STREET
BOHEMIA, NEW YORK

WELL NO.	MPE	DATE	DTW	WTE
MW-1	101.765	7/1/92	18.830	82.935
	101.765	7/9/92	18.740	83.025
MW-2	99.930	7/1/92	17.610	82.320
	99.930	7/9/92	17.450	82.480
MW-3	99.720	7/1/92	17.780	81.940
	99.720	7/9/92	17.680	82.040
MW-4	100.745	7/1/92	18.510	82.235
	100.745	7/9/92	18.380	82.365

AVG = 18 ft

AVERAGE WATER TABLE ELEVATION 82.418

MPE – MEASURING POINT ELEVATION
DTW – DEPTH TO WATER
WTE – WATER TABLE ELEVATION

GROUNDWATER TECHNOLOGY

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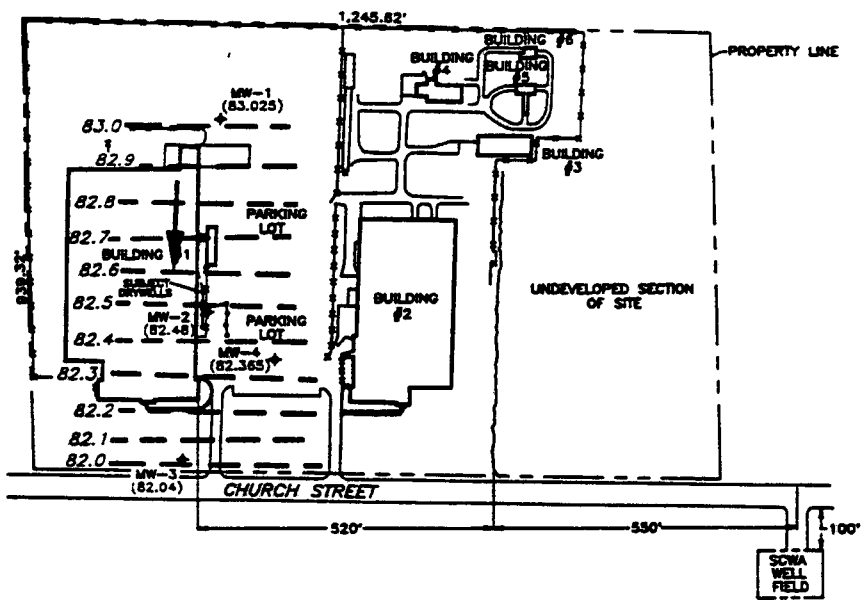

LEGEND

- MONITORING WELL
- DRY WELL
- UST UNDERGROUND STORAGE TANK
- FENCE
- INFERRED GROUNDWATER CONTOUR LINE
- INFERRED DIRECTION OF GROUNDWATER FLOW
- (82.48) WATER TABLE ELEVATION

NOTES: LOCATIONS, DIMENSIONS AND SCALE ARE APPROXIMATE FOR SCWA WELL FIELD.

SOURCE:

0 30 60
SCALE FEET

GROUNDWATER TECHNOLOGY
101-3 COLBY DRIVE
HOLBROOK, N.Y. 11741
(516) 472-4000

REV. NO.:	DRAWING DATE: 8/4/92	ACAD FILE: 5050-W.IY

WATER TABLE ELEVATION MAP
7 JULY 1992

CLIENT: DAYTON T. BROWN		FILE:
LOCATION: CHURCH STREET BOHEMIA, NEW YORK		PE/RE:
DESIGNED:	DETAILED: TRS	PROJECT NO.: 01113-5050	FIGURE: 1

THIS DRAWING AND ANY ATTACHMENTS ("DRAWINGS"), HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT AND MUST NOT BE USED, REUSED, REPRODUCED, MODIFIED OR COPIED ("USE") IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF GROUNDWATER TECHNOLOGY, INC. THIS DRAWING MAY CONTAIN CONFIDENTIAL AND PROPRIETARY INFORMATION OF GROUNDWATER TECHNOLOGY, INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS STRICTLY PROHIBITED.

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SUMMARY OF SOIL ANALYTICAL RESULTS
DAYTON T. BROWN
555 CHURCH STREET
BOHEMIA, NEW YORK

MW-2			EPA METHOD 8020				
SAMPLE NO.	SAMPLE DEPTH	DATE	BENZENE (PPB)	TOLUENE (PPB)	ETHYL BENZENE (PPB)	XYLENE (PPB)	TOTAL BTEX (PPB)
SS2	9-11'	6/29/92	ND	ND	ND	ND	ND
SS3	14-16'	6/29/92	ND	ND	ND	ND	ND
SS4	19-21'	6/29/92	ND	ND	ND	ND	ND
SS5	24-26'	6/29/92	ND	ND	1.1	7.7	8.8

MW-2			EPA METHOD 6010		
SAMPLE NO.	SAMPLE DEPTH	DATE	CHROMIUM (PPM)	COPPER (PPM)	ZINC (PPM)
SS2	9-11'	6/29/92	4.0	2.6	4.4
SS3	14-16'	6/29/92	1.9	ND	5.6
SS4	19-21'	6/29/92	6.0	ND	13
SS5	24-26'	6/29/92	3.5	ND	39

PPB - PARTS PER BILLION
PPM - PARTS PER MILLION

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Client Number: 011135050
Project ID: Dayton T. Brown
Login Number: M2-07-0012

ANALYTICAL RESULTS

Priority Pollutant Metals in Soil

GTEL Sample Number			070012-01	070012-02	070012-03	070012-04
Client Identification			MW2 SS2 9-11	MW2 SS3 14-16	MW2 SS4 19-21	MW2 SS5 24-26
Date Sampled			06/29/92	06/29/92	06/29/92	06/29/92
Date Analyzed (Method 7060)			07/07/92	07/07/92	07/07/92	07/07/92
Date Analyzed (Method 7740)			07/07/92	07/07/92	07/07/92	07/07/92
Date Analyzed (Method 245.5 CLP-M)			07/02/92	07/02/02	07/02/92	07/02/92
Date Analyzed (Method 6010)			07/06/92	07/06/92	07/06/92	07/06/92
Analyte	Method[a]	Detection Limit, mg/kg	Concentration, mg/kg			
Antimony	6010	6.0	< 6.0	< 6.1	< 6.7	< 7.1
Arsenic	7060	1.0	< 1.0	< 1.0	< 1.1	< 1.2
Beryllium	6010	0.50	< 0.50	< 0.51	< 0.56	< 0.59
Cadmium	6010	0.50	< 0.50	< 0.51	< 0.56	< 0.59
Chromium	6010	1.0	**4.0**	**1.9**	**6.0**	**3.5**
Copper	6010	2.5	**2.6**	< 2.6	< 2.8	< 3.0
Lead	6010	10	< 10	< 10	< 11	< 12
Mercury	245.5 CLP-M[c]	0.10	< 0.094	< 0.095	< 0.10	< 0.11
Nickel	6010	4.0	< 4.0	< 4.1	< 4.5	< 4.7
Selenium	7740	0.50	< 0.50	< 0.51	< 0.56	< 0.59
Silver	6010	1.0	< 1.0	< 1.0	< 1.1	< 1.2
Thallium	6010	20	< 20	< 20	< 22	< 24
Zinc	6010	2.0	**4.4**	**5.6**	**13**	**39**
Detection Limit Multiplier (7060)[b]			1.01	1.02	1.13	1.18
Detection Limit Multiplier (7740)[b]			1.01	1.02	1.13	1.18
Detection Limit Multiplier (245.5 CLP-M)[b]			0.935	0.948	1.05	1.09
Detection Limit Multiplier (6010)[b]			0.998	1.02	1.12	1.18
Percent Solids, %			97.2	96.0	86.4	83.4

a Test Method for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, USEPA, November 1986; digestion by EPA Method 3050 (except mercury). Results are reported on a dry weight basis.

b The detection limit multiplier indicates the adjustments made to the data and detection limits as a result of dilutions and percent solids.

GTEL ENVIRONMENTAL LABORATORIES, INC.

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Client Number: 011135050
Project ID: Dayton T. Brown
Login Number: M2-07-0012

ANALYTICAL RESULTS

Halogenated Volatile Organics in Soil
EPA Method 8010[a]

GTEL Sample Number		070012-01	070012-02	070012-03	070012-04
Client Identification		MW2 SS2 9-11	MW2 SS3 14-16	MW2 SS4 19-21	MW2 SS5 24-26
Date Sampled		06/29/92	06/29/92	06/29/92	06/29/92
Date Analyzed		07/03/92	07/03/92	07/03/92	07/03/92
Analyte	Detection Limit, ug/kg	Concentration, ug/kg			
cis-1,3-Dichloropropene	1.8	< 1.8	< 1.8	< 2.0	< 2.1
trans-1,3-Dichloropropene	3.0	< 3.0	< 3.0	< 3.3	< 3.4
1,1,2-Trichloroethane	3.0	< 3.0	< 3.0	< 3.3	< 3.4
Tetrachloroethene	2.1	< 2.1	< 2.1	< 2.3	< 2.4
Dibromochloromethane	3.0	< 3.0	< 3.0	< 3.3	< 3.4
Chlorobenzene	2.4	< 2.4	< 2.4	< 2.7	< 2.7
Bromoform	1.8	< 1.8	< 1.8	< 2.0	< 2.1
1,1,2,2-Tetrachloroethane	2.1	< 2.1	< 2.1	< 2.3	< 2.4
1,3-Dichlorobenzene	3.6	< 3.6	< 3.7	< 4.0	< 4.1
1,4-Dichlorobenzene	2.1	< 2.1	< 2.1	< 2.3	< 2.4
1,2-Dichlorobenzene	3.6	< 3.6	< 3.7	< 4.0	< 4.1
Detection Limit Multiplier[b]		1.00	1.02	1.11	1.15
Percent Solids, %		97.2	96.0	86.4	83.4

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; Sample prepared by EPA Method 5030 (solvent extraction and purge and trap). Results are reported on a dry weight basis.

b The detection limit multiplier indicates the adjustments made to the data and detection limits as a result of dilutions and percent solids.

c 1,2-Dichloroethene (total) is the sum of both *cis*- and *trans*- isomers.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Ref. 8
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SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DAYTON T. BROWN
555 CHURCH STREET
BOHEMIA, NEW YORK

WELL NO.	DATE	BENZENE (PPB)	TOLUENE (PPB)	ETHYL BENZENE (PPB)	XYLENE (PPB)	TOTAL BTEX (PPB)
MW-1	7/9/92	ND	ND	ND	ND	ND
MW-2	7/9/92	ND	ND	20	37	57
MW-3	7/9/92	ND	ND	ND	ND	ND
MW-4	7/9/92	ND	ND	ND	ND	ND

PPB - PARTS PER BILLION

GROUNDWATER TECHNOLOGY

Ref. 8
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GTEL
ENVIRONMENTAL LABORATORIES, INC.

Northeast Region
Meadowbrook Industrial Park
Milford, NH 03055
(603) 672-4835
(603) 673-8105 (FAX)

Client Number: 011135050
Project ID: Dayton T. Brown
Login Number: M2-07-0012

July 15, 1992

Ken Brooks
Groundwater Technology, Inc.
101-3 Colin Drive
Holbrook, NY 11741

Dear Mr. Brooks:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 07/01/92 under chain-of-custody record 45959.

A formal Quality Assurance / Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified (approved) by the State of New York under number 10599.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Susan C. Uhler
Laboratory Director

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Client Number: 011135050
Project ID: Dayton T. Brown
Login Number: M2-07-0012

ANALYTICAL RESULTS

Aromatic Volatile Organics in Soil - Low Level
Modified EPA Method 8020[a]

GTEL Sample Number		070012-01	070012-02	070012-03	070012-04
Client Identification		MW2 SS2 9-11	MW2 SS3 14-16	MW2 SS4 19-21	MW2 SS5 24-26
Date Sampled		06/29/92	06/29/92	06/29/92	06/29/92
Date Analyzed		07/09/92	07/09/92	07/09/92	07/09/92
Analyte	Detection Limit, ug/kg	Concentration, ug/kg (dry)			
Benzene	1.0	< 1.0	< 1.0	< 1.0	< 1.1
Toluene	1.7	< 1.7	< 1.7	< 1.8	< 1.8
Ethyl Benzene	1.0	< 1.0	< 1.0	< 1.0	1.1
Xylenes (total)	2.0	< 2.0	< 2.0	< 2.1	7.7
BTEX (total)	--	--	--	--	8.8
Detection Limit Multiplier[b]		1.00	1.00	1.05	1.07
Percent Solids, %		97.2	96.0	86.4	83.4

a Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, Table 2, US EPA November 1986; sample prepared by low level solvent extraction and purge and trap. Method modified to include additional compounds. Results are reported on a dry weight basis.

b The detection limit multiplier indicates the adjustments made to the data and detection limits as a result of dilutions and percent solids.

GTEL ENVIRONMENTAL LABORATORIES, INC.

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Client Number: 011135050
Project ID: Dayton T. Brown
Login Number: M2-07-0012

ANALYTICAL RESULTS

Halogenated Volatile Organics in Soil
EPA Method 8010[a]

GTEL Sample Number		070012-01	070012-02	070012-03	070012-04
Client Identification		MW2 SS2 9-11	MW2 SS3 14-16	MW2 SS4 19-21	MW2 SS5 24-26
Date Sampled		06/29/92	06/29/92	06/29/92	06/29/92
Date Analyzed		07/03/92	07/03/92	07/03/92	07/03/92
Analyte	Detection Limit, ug/kg	Concentration, ug/kg			
Dichlorodifluoromethane	1.1	< 1.1	< 1.1	< 1.2	< 1.3
Chloromethane	4.6	< 4.6	< 4.7	< 5.1	< 5.3
Vinyl Chloride	1.1	< 1.1	< 1.1	< 1.2	< 1.3
Bromomethane	11	< 11	< 11	< 12	< 13
Chloroethane	0.79	< 0.8	< 0.8	< 0.9	< 0.9
Trichlorofluoromethane	3.1	< 3.1	< 3.1	< 3.4	< 3.5
1,1-Dichloroethene	4.0	< 4.0	< 4.1	< 4.4	< 4.6
Methylene Chloride	4.3	< 4.3	< 4.4	< 4.8	< 4.9
1,2-Dichloroethene (total)[c]	1.8	< 1.8	< 1.8	< 2.0	< 2.1
1,1-Dichloroethane	1.8	< 1.8	< 1.8	< 2.0	< 2.1
Chloroform	5.5	< 5.5	< 5.6	< 6.1	< 6.3
1,1,1-Trichloroethane	3.0	< 3.0	< 3.0	< 3.3	< 3.4
Carbon Tetrachloride	2.7	< 2.7	< 2.7	< 3.0	< 3.1
1,2-Dichloroethane	2.2	< 2.2	< 2.2	< 2.4	< 2.5
Trichloroethene	4.9	< 4.9	< 5.0	< 5.4	< 5.6
1,2-Dichloropropane	1.8	< 1.8	< 1.8	< 2.0	< 2.1
Bromodichloromethane	5.0	< 5.0	< 5.1	< 5.6	< 5.7
2-Chloroethylvinyl Ether	1.1	< 1.1	< 1.1	< 1.2	< 1.3
Detection Limit Multiplier[b]		1.00	1.02	1.11	1.15

GTEL ENVIRONMENTAL LABORATORIES, INC.

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Client Number: 011135050
Project ID: Not Applicable
Login Number: M2-07-0240

ANALYTICAL RESULTS

Purgeable Aromatics in Water
Modified EPA Method 602[a]

GTEL Sample Number		070240-01	070240-02	070240-03	070240-04
Client Identification		MW1	MW2	MW3	MW4
Date Sampled		07/09/92	07/09/92	07/09/92	07/09/92
Date Analyzed		07/15/92	07/15/92	07/15/92	07/15/92
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl Benzene	0.8	< 0.8	**20**	< 0.8	< 0.8
Xylenes (total)	1.7	< 1.7	**37**	< 1.7	< 1.7
BTEX (total)	--	--	**57**	--	--
Detection Limit Multiplier[b]		1	1	1	1

a Federal Register, Vol. 49, October 26, 1984. Method modified to include additional compounds.
b The detection limit multiplier indicates the adjustments made to the data and detection limits for sample dilutions.

GTEL ENVIRONMENTAL LABORATORIES INC

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Client Number: 011135050
Project ID: Not Applicable
Login Number: M2-07-0240

ANALYTICAL RESULTS

Purgeable Halocarbons in Water
EPA Method 601[a]

GTEL Sample Number		070240-01	070240-02	070240-03	070240-04
Client Identification		MW1	MW2	MW3	MW4
Date Sampled		07/09/92	07/09/92	07/09/92	07/09/92
Date Analyzed		07/20/92	07/20/92	07/21/92	07/21/92
Analyte	Detection Limit, ug/L	Concentration, ug/L			
cis-1,3-Dichloropropene	0.21	< 0.21	< 0.21	< 0.21	< 0.21
trans-1,3-Dichloropropene	0.34	< 0.34	< 0.34	< 0.34	< 0.34
1,1,2-Trichloroethane	0.34	< 0.34	< 0.34	< 0.34	< 0.34
Tetrachloroethene	0.24	< 0.24	< 0.24	< 0.24	< 0.24
Dibromochloromethane	0.34	< 0.34	< 0.34	< 0.34	< 0.34
Chlorobenzene	0.27	< 0.27	< 0.27	< 0.27	< 0.27
Bromoform	0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,3-Dichlorobenzene	0.41	< 0.41	< 0.41	< 0.41	< 0.41
1,4-Dichlorobenzene	0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichlorobenzene	0.41	< 0.41	< 0.41	< 0.41	< 0.41
Detection Limit Multiplier[b]		1	1	1	1

a Federal Register, Vol. 49, October 26, 1984.
b The detection limit multiplier indicates the adjustments made to the data and detection limits for sample dilutions.
c 1,2-Dichloroethene (total) is the sum of both *cis*- and *trans*- isomers.

GTEL ENVIRONMENTAL LABORATORIES INC

Reference 9

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FILE COPY

NUS CORPORATION
A Halliburton Company

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY

DRAFT

Brown Dayton I
Dayton T. Brown, Inc.
Site Name

NYD002050177
EPA Site ID Number

555 Church Street
Bohemia, N.Y. 11716
Address

02-8703-66
TDD Number

SITE DESCRIPTION

Dayton T. Brown, Inc. is located in the village of Bohemia, Suffolk County, New York, in central Long Island. The facility, operating since 1960, is divided into two divisions: manufacturing, and industrial research and development. The site covers of 31 acres, of which approximately 21 acres are commercially active. There are eight buildings on site: a manufacturing building, a laboratory building, and six remote testing buildings. The site is in an industrial/commercial section.

Dayton T. Brown has generated a variety of waste over the years, including plating waste, painting waste, and photo waste. These wastes are currently either removed by licensed scavenger company or discharged to a permitted basin.

There are two areas of concern containing elevated levels of solvents and heavy metals; the four underground holding tanks and the recharge basin. The underground holding tanks were used to hold plating waste prior to off-site disposal. At present, the tanks contain plating sludge and are possibly in unsound condition. The recharge basin is SPDES permitted and receives process cooling water and photo waste. In the past Dayton T. Brown has violated this permit for limits and parameters.

On July 28, 1987, Region 2, FIT conducted a site inspection. One effluent, one groundwater, two soil, two sediment, and two sludge samples were collected and analyzed for Hazardous Substance List parameters. Analytical results are not yet available.

HAZARD RANKING SCORE: No score pending receipt of analytical results.

Prepared by: Edward L. Leonard of NUS Corporation

Date: 8/7/87

Ref 9

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Dayton T. Brown Inc.

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: 555 Church Street

03 CITY: Bohemia

04 STATE: NY

05 ZIP CODE: 11716

06 COUNTY: Suffolk

07 COUNTY CODE: 103

08 CONG DIST.: 2

09 COORDINATES

LATITUDE: 40° 46' 15". N

LONGITUDE: 073° 06' 00". W

10 TYPE OF OWNERSHIP (Check one)

X A. PRIVATE _ B. FEDERAL _ C. STATE
_ D. COUNTY _ E. MUNICIPAL _ F. OTHER
_ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION: 7 / 28 / 87 (MONTH DAY YEAR)

02 SITE STATUS: X ACTIVE _ INACTIVE

03 YEARS OF OPERATION: 1960 (BEGINNING YEAR) / still active (ENDING YEAR) _ UNKNOWN

AGENCY PERFORMING INSPECTION (Check all that apply)

_ A. EPA X B. EPA CONTRACTOR NUS Corp., FIT 2 (Name of firm) _ C. MUNICIPAL _ D. MUNICIPAL CONTRACTOR _____ (Name of firm)

_ E. STATE _ F. STATE CONTRACTOR _____ (Name of firm) _ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Edward L. Leonard	Environmental Scientist	NUS Corp.	(201) 225-6160

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Claire Marcussen	Chemist	NUS Corp.	(201) 225-6160
Gerald Gilliland	Technician	NUS Corp.	(201) 225-6160
Thomas Varner	Engineer	NUS Corp.	(201) 225-6160
Dan de Bruijn	Technician	NUS Corp.	(201) 225-6160

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13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Robert Single	Personnel Manager	Dayton T. Brown 555 Church Street Bohemia, NY 11716	(516) 589-6300
Bill Schaat	Corporate Maintenance	Dayton T. Brown 555 Church Street Bohemia, NY 11716	(516) 589-6300

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
X PERMISSION _ WARRANT	0830	Sunny and hot. Air temperature 80 - 90° F. Steady wind from the north at approximately 5 mph.

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Diana Messina	U.S. EPA	(201) 321-6776

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
E. L. Leonard	U.S. EPA	NUS Corp., FIT 2	(201) 225-6160	8 / 7 / 87 (MONTH DAY YEAR)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- _ A. SOLID
- _ B. POWDER, FINES
- X C. SLUDGE
- _ D. OTHER _____ (Specify)
- _ E. SLURRY
- X F. LIQUID
- _ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS 4,643

03 WASTE CHARACTERISTICS (Check all that apply)

- X A. TOXIC
- _ B. CORROSIVE
- _ C. RADIOACTIVE
- X D. PERSISTENT
- X E. SOLUBLE
- _ F. INFECTIOUS
- _ G. FLAMMABLE
- _ H. IGNITABLE
- _ I. HIGHLY VOLATILE
- _ J. EXPLOSIVE
- _ K. REACTIVE
- _ L. INCOMPATIBLE
- _ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown	Unknown	There are two major areas of concern: four inactive underground holding tanks, containing plating sludge; an a permitted recharge basin, receiving cooling water and photo waste.
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown	Unknown	
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown	Unknown	
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	Unknown	

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IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Copper	7440-50-8	Recharge Basin	8.0	mg/L
MES	Lead	7439-92-1	Recharge Basin	0.4	mg/L
MES	Silver	7440-22-4	Recharge Basin	0.7	mg/L
SOL	1,1,1-Trichloroethane	71-55-6	Recharge Basin	8.0	ppb
SOL	Trichloroethene	79-01-6	Recharge Basin	7.8	ug/L

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Toluene	108-88-3	FDS		
FDS	Methyl ethyl ketone	78-93-3	FDS		
FDS	Methyl isobutyl ketone	108-10-1	FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (See specific references. e.g., state files, sample analysis, reports)

Background Files, Suffolk County Department of Health Services (SCDHS), Suffolk County, New York.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for groundwater contamination via the possibly leaking underground storage tanks and the discharges, that exceeded permit levels, to the recharge basin.

01 _ B. SURFACE WATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) — _ POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for surface water contamination does not exist. There are no drainage routes from the site to the nearest body of water.

01 _ C. CONTAMINATION OF AIR — 02 _ OBSERVED (DATE: _____) — _ POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for air contamination does not exist. Waste storage and disposal facilities are located below ground. No air monitoring readings were detected above background in the ambient air.

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01 _ D. FIRE/EXPLOSIVE CONDITIONS — 02 _ OBSERVED (DATE: _____) — _ POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Field observations did not indicate the potential for significant fire/explosive conditions on site.

01 _ E. DIRECT CONTACT — 02 _ OBSERVED (DATE: _____) — _ POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for direct contact does not exist. Areas of contamination are below ground and entirely fenced.

01 X F. CONTAMINATION OF SOIL — 02 _ OBSERVED (DATE: _____) — X POTENTIAL — _ ALLEGED
03 AREA POTENTIALLY AFFECTED: Unknown (ACRES) — 04 NARRATIVE DESCRIPTION

The potential exists for soil contamination via the underground storage tanks and the recharge basin.

01 X G. DRINKING WATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for drinking water contamination via the underground holding tanks and the recharge basin. Suffolk County drinking water is entirely supplied by groundwater.

01 _ H. WORKER EXPOSURE/INJURY — 02 _ OBSERVED (DATE: _____) — _ POTENTIAL — _ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The potential for worker exposure/injury does not exist. Areas of contamination are below ground and entirely fenced.

01 X I. POPULATION EXPOSURE/INJURY — 02 _ OBSERVED (DATE: _____) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 200,000 — 04 NARRATIVE DESCRIPTION

The potential exists for population exposure to possibly contaminated drinking water.

Ref 7

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 _ J. DAMAGE TO FLORA — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for damage to flora does not exist. The site is located in a densely populated industrial/commercial area.

01 _ K. DAMAGE TO FAUNA — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

The potential for damage to fauna does not exist. The site is located in a densely populated industrial/commercial area.

01 _ L. CONTAMINATION OF FOOD CHAIN — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential for food chain contamination does not exist. The site is located in a densely populated industrial/commerical area.

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01 X M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 X OBSERVED (DATE: 1/25/84) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 5,343
04 NARRATIVE DESCRIPTION

There are two areas of unstable waste containment: the recharge basin, which receives effluent discharge in violation of SPDES permit limits and parameters; and the possibly unsound underground holding tanks, which store waste.

01 X N. DAMAGE TO OFFSITE PROPERTY — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

The potential exists for off-site property damage via contamination of wells.

01 _ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

There is no known contamination of sewers, storm drains, or WWTP's.

01 X P. ILLEGAL/UNAUTHORIZED DUMPING — 02 X OBSERVED (DATE: 1/25/84) _ POTENTIAL _ ALLEGED
04 NARRATIVE DESCRIPTION

Analysis of the effluent entering the recharge basin by the SCDHS has demonstrated violations of SPDES permit limits and parameters.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

There are no other known, potential or alleged hazard.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 200,000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Background Files, Suffolk County Water Authority, Suffolk County, New York.
U.S. Geological Survey Topographic Map-Patchougue, New York. 1967.
Site Inspection, NUS Corp., FIT 2, 7/28/87.
Background Files, SCDHS, Suffolk County, New York.

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POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
_ A. NPDES				
_ B. UIC				
_ C. AIR				
_ D. RCRA				
_ E. RCRA INTERIM STATUS				
_ F. SPCC PLAN				
X G. STATE (Specify) SPDES	NY0075809	6/1/85	6/1/90	
_ H. LOCAL (Specify)				
_ I. OTHER (Specify)				
_ J. NONE				

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III. SITE DESCRIPTION

01 Storage/Disposal (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
X A. SURFACE IMPOUNDMENT	222,156	gallons
_ B. PILES		
_ C. DRUMS, ABOVE GROUND		
_ D. TANK, ABOVE GROUND		
X E. TANK, BELOW GROUND	10,000	gallons
_ F. LANDFILL		
_ G. LANDFARM		
_ H. OPEN DUMP		
_ I. OTHER _____ (Specify)		

04 TREATMENT (Check all that apply)
- _ A. INCINERATION
- _ B. UNDERGROUND INJECTION
- _ C. CHEMICAL/PHYSICAL
- _ D. BIOLOGICAL
- _ E. WASTE OIL PROCESSING
- _ F. SOLVENT RECOVERY
- _ G. OTHER RECYCLING/RECOVERY
- _ H. OTHER _____ (Specify)

05 OTHER
- X A. BUILDINGS ON SITE

06 AREA OF SITE
31.7 (Acres)

07 COMMENTS

The surface impoundment is a SPDES-permitted recharge basin receiving cooling water and photo waste from the laboratory building. The four underground concrete tanks were used for holding plating waste. At present the tanks are not used, but contain some plating sludge.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

_ A. ADEQUATE, SECURE _ B. MODERATE X C. INADEQUATE, POOR _ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The underground tanks are in unknown condition, with no liner or leak containment system.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: _ YES X NO

02 COMMENTS The underground tanks and the recharge basin are entirely fenced and of limited access to the public and employees.

VI SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Background Files, SCDHS, Suffolk County, New York.
Site Inspection, NUS Corp. FIT 2, 7/28/87.

Ret 1

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D 000205177

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable) | 02 STATUS | 03 DISTANCE TO SITE

	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	
COMMUNITY	A. _	B. X	A. _	B. X	C. _	A. 0.07 (mi)
NON-COMMUNITY	C. _	D. _	D. _	E. _	F. _	B. _ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

X A. ONLY SOURCE FOR DRINKING _ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) _ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) _ D. NOT USED, UNUSEABLE

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02 POPULATION SERVED BY GROUND WATER: 200,000 03 DISTANCE TO NEAREST DRINKING WATER WELL: 0.07 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
18 (ft)	Southwest	18 (ft)	Unknown (gpd)	X YES _ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

There are nine wells within the 3-mile radius of the site, serving approximately 200,000 people. The wells range in depth from 83 feet to 838 feet. Approximately half the wells are screened in the Glacial Aquifer and half in the Magothy Aquifer. The three nearest wells are located approximately 400 feet southeast of the site, on Church Street. The two shallow wells are screened at 156 feet and 158 feet in the Glacial Aquifer. Both wells are out of service, due to organic contamination. The deeper well is screened at 838 feet in the Magothy Aquifer.

10 RECHARGE AREA

X YES _ NO COMMENTS Aquifers are recharged directly by rainwater infiltration.

11. DISCHARGE AREA

X YES _ NO COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

_ A. RESERVOIR, RECREATION DRINKING WATER SOURCE _ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES _ C. COMMERCIAL, INDUSTRIAL X D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
None		(mi)
		(mi)
		(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5,342 NO. OF PERSONS	B. 26,999 NO. OF PERSONS	C. 57,659 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.01 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: 8,155

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 0.002 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site. e.g., rural, village, densely populated urban area)

The site is located within the village of Bohemia at the eastern end of Islip Township. It is a densely populated suburban area. Brookhaven Township is 2.5 miles to the north and 30 miles to the east.

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p. 8 of 37

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

_ A. 10^{-6} - 10^{-8} cm/sec _ B. 10^{-4} - 10^{-6} cm/sec _ C. 10^{-4} - 10^{-3} cm/sec X D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

X A. IMPERMEABLE (Less than 10^{-6} cm/sec) _ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) _ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) _ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

DRAFT

03 DEPTH TO BEDROCK: 1,650 (ft)
04 DEPTH OF CONTAMINATED SOIL ZONE: 14 (ft)
05 SOIL pH: Unknown

06 NET PRECIPITATION: 14 (in)
07 ONE YEAR 24 HOUR RAINFALL: 2.5 (in)
08 SLOPE
SITE SLOPE: <1 %
DIRECTION OF SITE SLOPE: Southeast
TERRAIN AVERAGE SLOPE: <1 %

09 FLOOD POTENTIAL
10
SITE IS IN >500 YEAR FLOODPLAIN _ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. >2.0 (mi)
OTHER: B. >1.0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): >1.0 (mi)
ENDANGERED SPECIES: Not Applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL: A. 0.0 (mi)
RESIDENTIAL AREAS: NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES: B. 0.01 (mi)
AGRICULTURAL LANDS
PRIME AG LAND: C. 0.20 (mi)
AG LAND: D. 0.01 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site property is relatively level, at an elevation of approximately 45-50 feet above mean sea level. Regional slope of the terrain is southerly. The site is located within an industrial/commercial complex, directly south of MacArthur Airport. A large residential community surrounds the complex to the east, south, and west.

VII SOURCES OF INFORMATION (Cite specific references e.g., state files, sample analysis, reports)

Telecon between D. Trube (NUS Corp.) and P. Dugan (Suffolk County Water Authority) on 3/24/87.
Background Files, SCDHS, Suffolk County, New York.
Soren, J., Result of Subsurface Exploration in the Mid-Island Area of Western Suffolk County, Long Island, New York, 1971.
Federal Register, Volume 43, Number 120, Page 26,611, June 21, 1978.
Draft Graphical Exposure Modeling System (GEMS), U.S. EPA Office of Pesticide and Toxic Substances, 1984.
HRS Users Manual, Mitre Corp., 1984.
Aerial Photograph No. 3815-33-221. Lockwood, Kessler and Bartlett, 3/26/87.
Site Inspection, NUS Corp. FTI 2, 7/28/87.
Significant Habitat Overlay, NYSDEC, 1987.
Flood Insurance Rate Map, U.S. Department of Housing and Urban Development - Town of Islip, New York, July 1983.
Important Farmlands of Suffolk County, New York, U.S. Department of Agriculture, Soil Conservation Service, October 1978.
Franke, O.L. and N. E. McClymonds, Summary of the Hydrologic Situation on Long Island, New York as a Guide to Water Management Alternatives, Geological Survey, Paper 627-F, 1972.

Ref 1

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050179

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	1	Organic Labs: Alliance Technologies 213 Burlington Road Bedford, MA 01730	10/87
SURFACE WATER			
WASTE Sludge	2	Century Refining Co. 695 North Seventh Street Brighton, CO. 80601	
Effluent	1		
AIR			
RUNOFF		Inorganic Labs: Hittman Ebasco Assoc. Inc. 9151 Rumsey Road Columbia, MD 21045	10/87
SPILL			
SOIL	2	Chemtech Consulting Group 360 West 11th Street New York, NY 10014	
VEGETATION			
OTHER Sediment	2		

DRAFT

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Monitoring	No readings above ambient conditions were detected on the OVA flame ionization detector or the HNu photoionization detector. Elevated readings were detected in underground holding tank No. 3 on the OVA.
Dimensions	Approximate measurements were obtained for the swale and recharge basin. The depth was obtained for each underground holding tank.

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND X AERIAL

02 IN CUSTODY OF NUS Corp., FIT 2
(Name of organization or individual)

03 MAPS
X YES
_ NO

04 LOCATION OF MAPS
NUS Corp., FIT 2

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field notebook No. 0115. Filed under TDD No. 02-8703-66.

VI. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

Site Inspection, NUS Corp., FIT 2, 7/28/87.

Ref 9

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177
B.108439

II. CURRENT OWNER(S)

01 NAME	02 D + B NUMBER	PARENT COMPANY (If applicable) 08 NAME	09 D + B NUMBER
Dayton T. Brown, Inc.			
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
555 Church Street			
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE
Bohemia / NY	11716		

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

DRAFT

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

01 NAME	02 D + B NUMBER	08 NAME	09 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE	12 CITY / 13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D + B NUMBER
J.M. Greene	
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
Great River Road	
05 CITY / 06 STATE	07 ZIP CODE
Great River / NY	

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

01 NAME	02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE
05 CITY / 06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Telecon between E. Leonard (NUS Corp.) and Office Clerk (Islip - Assessors Office), on 7/23/87.
Telecon between E. Leonard (NUS Corp.) and Office Clerk (Suffolk County Clerks Office), on 7/23/87.

Ref 9

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002060177
P. 110539

II. CURRENT OPERATOR(S)

01 NAME		02 D + B Number	OPERATOR'S PARENT COMPANY (If applicable) 10 NAME		11 D + B NUMBER
Dayton T. Brown, Inc.					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
555 Church Street					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Bohemia	NY	11716			
08 YEARS OF OPERATION	09 NAME OF OWNER				
17					

III. PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)

01 NAME		02 D + B Number	PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable) 10 NAME		11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

DRAFT

01 NAME		02 D + B Number	10 NAME		11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

01 NAME		02 D + B Number	10 NAME		11 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Background Files, U.S. EPA, Region 2.

Ref 9

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050127
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DRAFT

II ON-SITE GENERATOR

01 NAME		02 D + B NUMBER
Dayton T. Brown, Inc.		
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
555 Church Street		
05 CITY	06 STATE	07 ZIP CODE
Bohemia	NY	11716

III OFF-SITE GENERATOR(S)

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME		02 D + B NUMBER	01 NAME		02 D + B NUMBER
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Background Files, SCDHS, Suffolk County, New York.

Ref 7

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050117

P130439

II. PAST RESPONSE ACTIVITIES

01 ___ A. WATER SUPPLY CLOSED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ D. SPILLED MATERIAL REMOVED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ E. CONTAMINATED SOIL REMOVED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ F. WASTE REPACKAGED — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ G. WASTE DISPOSED ELSEWHERE — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

DRAFT

No previous history.

01 ___ H. ON SITE BURIAL — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history

01 ___ I. IN SITU CHEMICAL TREATMENT — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ K. IN SITU PHYSICAL TREATMENT — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ L. ENCAPSULATION — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ M. EMERGENCY WASTE TREATMENT — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ N. CUTOFF WALLS — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ P. CUTOFF TRENCHES/SUMP — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ Q. SUBSURFACE CUTOFF WALL — 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

II. PAST RESPONSE ACTIVITIES

01 ___ R. BARRIER WALLS CONSTRUCTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ S. CAPPING/COVERING 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ T. BULK TANKAGE REPAIRED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ U. GROUT CURTAIN CONSTRUCTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ V. BOTTOM SEALED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ W. GAS CONTROL 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

DRAFT

No previous history.

01 ___ X. FIRE CONTROL 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ Y. LEACHATE TREATMENT 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ Z. AREA EVACUATED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ 1. ACCESS TO SITE RESTRICTED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ 2. POPULATION RELOCATED 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history.

01 ___ 3. OTHER REMEDIAL ACTIVITIES 02 DATE: _____ 03 AGENCY: _____
04 DESCRIPTION

No previous history

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D002050177

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION X YES _ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

5/6/87 Consent Order (No. 1-1373) filed by NYSDEC.
This order required Dayton T. Brown to comply with state air emission regulations (Part 228, Title 6, NYCRR) and to submit quarterly progress reports summarizing actions and/or efforts taken.

DRAFT

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, report)

Background Files, SCDHS, Suffolk County, New York.

0052-F
02-8703-66

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NUS CORPORATION

II

0115

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DAYTON T. BROWN
TDD# 02-8703-66
PROJECT MANAGER: E. LEONARD
LOGBOOK# 0115
JULY 23, 1987

GUIDANCE FOR PROPER USE OF LOG BOOKS

Purpose

- Serves to document onsite activities and be understandable to an outside reader.
- Provides the basis for later written reports.
- Used as an evidentiary document and may be used in legal proceedings.

Distribution

- Controlled by the project manager and distributed as appropriate to personnel designated by the project manager.

General Procedures

- Record information in language which is objective and factual.
- Use ink. Waterproof ink is recommended.
- Leave first two pages blank. They serve as space for the table of contents to be added when the log book is complete.
- The first written page identifies the date, time, TDD number, site name, location, NUS personnel and their responsibilities, other non-NUS personnel and observed weather conditions.
- Start on a new page at the start of each day's field activities. This page should identify date, time, TDD number, site name and location, NUS personnel and their responsibilities, other non-NUS personnel and observed weather conditions.
- List all persons leaving or entering the site.
- Information recorded in the log book should be in chronological order.
- Sign and date each page, log all entries using a 24 hour clock. Entries should be time logged every 15 to 30 minutes.
- Corrections are to be lined through and initialed. No erroneous notes are to be made illegible.
- Include a sketch or map of the site which can be used to locate photo or sample locations. Note landmarks, indicate north, and if possible include an approximate scale. Include as many sketches and maps as necessary.
- A person not present when field activities were being documented should read each completed page, and countersign and date when satisfied that the written notes are understandable.

Specific Field Activities To Be Documented

- Record the who, what and where of field activities.
- Indicate sampling and photo locations on a site sketch or map.
- As part of the chain of custody procedure, recorded in-situ sampling information must include sample number, date, time, sampling personnel, sample type, designation of sample as a grab or composite, and any preservative used.
- Information for in-situ measurements must include a sample ID number, the date, time, and personnel taking measurements. Pertinent in-situ measurements include but are not limited to pH, temperature, conductivity, flow measurements, continuous air monitoring measurements, and stack gas analysis. If infield calculations are necessary they must be checked and signed by a second team member.
- Create a photo log to document photos taken in the field. These must include date, time, photographer, sample number, roll number, frame number, photo ID number and description. Indicate if the film is for slides or prints in the column for roll number. Photo ID numbers can be added at the time the photo log is assembled.
- Record onsite health and safety measures used. Describe observed potential hazards to health and safety. Document the level of protection used, decontamination procedure used and specific decontamination solutions.
- When sampling is complete, a summary log is to be completed. It must include date, time, sample number, description, field book reference page, and the number and date of the chain of custody form on which the sample is listed. Indicate whether or not the sample was split.
- Record details regarding relevant information obtained during onsite interviews. Include names of persons interviewed, the interest group represented, their address and phone number.
- Record any other relevant information which would be difficult to generate at a later date.

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DAYTON T. BROWN
TDD # 02-8703-66

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E.L. Leonard 7/30/87 J. Kennedy 8/4/87

DAYTON T. BROWN 7/28/87 Ref 9 p. 20 of 39
TDD# 02.8703.66

EQUIPMENT ON SITE

CAMERA (SLIDE) # 428512
CAMERA (PRINT) # 469770
MINI RAD # 428587
COMPASS C
OVA-D # 428696 CALB 7/24/87 S.B.
HNU-B # 307138 CALB 7/26/87 S.B.
EXPLOS.-D # 307151 CALB 7/11/87 S.B.
DRAEGER A
SCBA 428550 T. VARNAR
~~# 192036~~ D. DEBRUIJN
192036

WEATHER: AM SUNNY. WARM ~ 80°F
CLOUD COVER ~ 5%. BREEZE STEADY
FROM NORTH ~ 5 MPH.

PM SUNNY. HOT ~ 85-90°F
CLOUDY COVER ~ 5%. STEADY BREEZE
FROM NORTH ~ 5 MPH.

0820 HRS ARRIVE ON SITE

0827 HRS SEE R. SINGLE - PERSONNEL MANG

CORP. MAINT - BILL SCHAAF

BACKGROUND DATA:
- # EMPLOYEES ~ 350
- FENCE ALL ROUND EXCEPT FRONT

CL Leonard 7/30/87 Steinhardt 8/4/87

DAYTON T. BROWN
TDD # 02-8703-66

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- 24 HR SECURITY - POST AT S/W CORNER LAB
- SITE ~ 30 ACRES
  ~25 ACTIVE INCLUDING SOFTBALL FIELD + PICKNIC TABLE
- VOLUME OF TANKS ~ 6000 GALLON TOGETHER, WILL GIVE BETTER ESTIMATE.
- LEACH POOL DIMENSION ~25 FEET DIA X ~8 FEET DEEP WILL MEASURE
- SWALE ~ 400 FT X 10 FT X 5-6 FT
  L W D

0850 ~~0855~~ HRS FIND AREA FOR DECON AREA.

0855 HRS START SETTING UP DECON AREA.

0905 HRS D. DEBRUINN & T. VARNAR SUIT-UP
C. MARCUSSEN HOLD TAILGATE SAFTY MEETING
NUS PERSONNEL ONSITE

E. LEONARD - PM
C. MARCUSSEN - SSO
G. GILLILAND - SMO
T. VARNAR - SAMPLER
D. DEBRUINN - SAMPLER

0916 HR D. DEBRUINN ON AIR. T. VARNAR. BACK-UP.

0919 HRS NO READINGS ABOVE BACKGROUND ON OVA BEHIND MFG BUILDING, NORTHEND.

EKLeonard 7/30/87 Stanney 8/4/87

DAYTON C. BROWN 11/28/87 p 22 of 39
TDD# 02-8703-66

0921 HRS NO READINGS ABOVE BACKGROUND ON OVA IN NORTH END OF SWALE. COOLING WATER, BUT NONE FOR ~ PAST 1.5 YRS. PRESENTLY ROOF RUNNOFF INTO SWALE. NO WASTE OF ANY SORT IE ~~PHOTO~~ RINSE OR PLATING WASTE.

0924 HRS NO READINGS ABOVE BACKGROUND ON OVA IN MIDDLE OF SWALE

0927 HRS NO READINGS ABOVE BACKGROUND ON OVA AT SOUTH END OF SWALE.

0928 HRS D. DEBRUIJN OFF AIR.

0935 HRS BACK OF LAB. BUILDING. D. DEBRUIJN ON AIR.

0936 HRS N/E CORNER OF LAB BUILDING NO ~~RAD~~ READINGS ABOVE BACKGROUND ON ~~EH~~ OVA.

0939 HRS NO READINGS IN ~~LEACHING~~ ~~EH POOL~~ RECHARGE BASIN, ABOVE BACKGROUND ON OVA.

C. Leonard 7/30/87 , S. Kennedy 8/4/87

DAYTON T. BROWN
TDD 02-8703-66

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0940 HRS D. DEBRUIJN OFF AIR.

0946 HRS D. DEBRUIJN ~~ON AIR~~ ON AIR.
NEAR UNDERGROUND HOLDING TANKS ~40'N.
RECHARGE BASIN NO
READ. BASIN FOR ROOF RUN OFF.

0948 HRS HOLDING TANKS (SEE PG 17)
SOUTH TANK ~~NORTH~~ 6-7 PPM OVA
~~HNU~~ NOTHING ABOVE BACKGROUND HNU

0951 HRS NORTH ~~SOUTH~~ TANK
OVA NO READINGS ABOVE BACK GROUND
HNU NO READINGS ABOVE BACK GROUND

0956 HRS NO READINGS ABOVE BACKGROUND
ON OVA BEHIND SOLVENT STORAGE
SHED

0958 HRS D. DEBRUIJN OFF AIR

1000 HRS TAKING BREAK. PREPING FOR
SAMPLES.

1010 HRS T. VARNAR SUITS-UP FOR
SOIL SAMP., BY SOL. STORAGE
SHED.

CL Leonard 7/30/87 SKENNEDY 8/4/87

DAYTON T. BROWN 7/28/87 Ref 4 p 24 of 37
TDD # 02-8703-66 8

1022 HRS T. VARNAR ON RESPIRATION + STARTS SAMPLING FOR S-1 AT NORTH END OF SOLVENT STORAGE SHED.

1023 HRS NO SURFACE READINGS ABOVE BACKGROUND ON OVA

1027 HRS NO READING ABOVE BACKGROUND ON OVA, AT 6 INCHES. SAMPLE OBTAINED AT 6-8 INCHES. SPLIT SAMPLES. OBTAINED 1 - 12 OZ JAR SAMPLE FOR SITE REP.

1029 HRS B. SINGLE STATES DEPTH TO GROUND WATER ~14-16 FT DEPENDS ON TIME OF YEAR + AREA ON SITE.

1033 HRS FINISH SAMPLING S-1, HEAD TO SAMPLE S-2.

1040 HRS D. DEBRUIJN ON AIR QEH NO READINGS ON EXPLOSIMETER ON NORTH + SOUTH UNDERGROUND STORAGE TANKS

1044 HRS D. DEBRUIJN OFF AIR T. VARNAR STARTS OBTAINING SAMP OBTAINING S-2. NO READING ABOVE BACKGROUND ON OVA, AT SURFACE.

[signature] S. Kenney 8/4/87

TOD # 02-8703-66

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1046 HRS D. DEBRUIJN ON AIR.

1048HRS S-2 OBTAINED AT ~ 6-8 INCHES IN DEPTH. NO READINGS ABOVE BACKGROUND ON OVA AT 6 INCHES

1054 HRS T. VARNAR FINISH OBTAINING SAMPLE S-2. ALSO OBTAINED SAMPLE FOR SITE REP 1-1202 JAR.

1055 HRS. D. DEBRUIJN OFF AIR. NO CYANIDE READINGS OBTAINED FROM EITHER UNDERGROUND HOLDING TANKS NORTH OR SOUTH.

1056 HRS. T. VARNAR OFF RESPIRATOR.

1057 HRS SAMPLERS TAKING BREAK AT DECON AREA.

1102 HRS PREPING TO TAKE AIR SAMP ON TWO ADD UNDERGROUND HOLDING TANKS # 1 + 4. (SEE PG. 17)

1106 HRS D. DEBRUIJN ON AIR.

1107 HRS UNDERGROUND TANK # 1 NO READ ABOVE BACKGROUND ON OVA + HNU NO READING ON EXPLOSIMETER

CL Leonard 7/30/87 S. Kennedy 8/4/87

DAYTON T. BROWN
TDD# 02-8703-66

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R. SINGLE STATES THAT TANK 1+4 ARE PROBABLY OVERFLOWS 1+2 CONNECTED + 3+4 CONNECTED

1111 HRS #1 NO CYANIDE READINGS

1113 HRS #4 NO READINGS ABOVE BACK-GROUND ON OVA + HNU. NO READINGS ON EXPLOSIMETER.

~~WE~~ HOLDING TANKS 2+3 APPOXIMATE SIZE 8'X8' X 14' DEEP. NORMALLY REMOVED ~6000 GAL. AT A TIME OF PLATING WASTE FROM # 2+3. 1+4 OVERFLOWS + INTERCONNECTED.

1117 HS TANK #4 NO CYANIDE READINGS.

1118 HRS D. DEBRUIJN OFF AIR.

1119 HRS TAKING BREAK.

1128 HRS D. DEBRUIJN ON AIR.

[signature] 7/30/87 S. Kennedy 8/4/87

DAYTON T. BROWN
TDD # 02-8703-66

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11

1131 HRS D. DEBRUIJN STARTS SAMPING FOR SW-1. WITH PONAR ON TANK #3.

1134 HRS NO READINGS ABOVE BACKGROUND ON HNU + OVA.

1136 HRS D. DEBRUIJN OFF AIR
CHANGES AIR TANKS. MOIST DENSE CLAY-LIKE SLUDGE. BROWN, RED-ORANGE PURPLE + GREEN IN COLOR

1137 HRS NO READINGS ABOVE BACKGROUND ON OVA + HNU.

D. DEBRUIJN ON AIR

1140 HRS D. DEBRUIJN STARTS COLLECTING SAMPLE SW-1 FROM TANK #3. (INTO BOTTLES)

1141 HRS FINISH SAMPLING. TANK #3, SW-1. ALSO OBTAINED 1-12oz SAMPLE FOR REP.

R. SINGLE STATES ALL FOUR TANK HOLD ~ 10000 - 12000 GALLONS, INFORMATION JUST AQUIRED FROM B. SCHAAF

1151 HRS D DEBRUIJN OFF AIR.

1152 HRS BREAK

C L Leonard 7/30/87 Steenedy 5/4/87

DAYTON T. BROWN
TDD # 02-8703-66
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1205 HRS D. DEBRUIJN ON AIR.

1207 HRS ~~ST~~ ~~ell~~ D DEBRUIJN STARTS SAMPLING TANK #2 WITH EKMAN DREDGE. SLU-2

1209 HRS NO READINGS ABOVE BACKGROUND ON OVA + HNU
SLUDGE MOIST DENSE CLAY-LIKE ~~BLUE~~ ~~ell~~ BLUE-GREEN, RED-ORANGE WITHBROWN IN COLOR.

1211 HRS D. DEBRUIJN STARTS OBTAINING ~~SLU-1~~ ~~ell~~ SLU-2 IN TANK # 2 (INTO BOTTLES)

1217 HR D. DEBRUIJN FINISHING SAMPLING FOR SL-2. ALSO OBTAINED 1-12oz SAMPLE FOR REP.

TANK DEPTHES TO SLUDGE

1219 HRS #1 12' 0"

#2 10' 2"

#3 8' 4"

#4 12' 8"

Ch Leonard 7/30/87 S. Kennedy 8/4/87

TOD# 02-8703-66

1221 HRS D DEBRUIN OFF AIR

1225 HRS CLOSED ALL HOLD TANKS
BACK TO DRON AREA TO
REST.

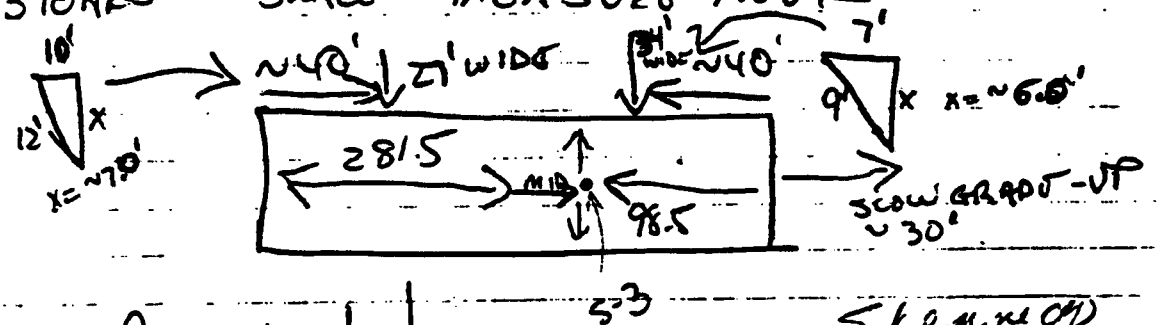
1250 HRS LEAVE TO OBTAIN SAMPLES
S-3. IN SWALE. E LEONARD,
T. VARNAR + B SINGLE

1256 HRS T VARNAR ON RESPIRATOR.

1258 HRS T. VARNAR STARTS OBTAINING
S-3. NO READING ABOVE
BACKGROUND ON HNU.
SAMPLE OBTAINED N12-16 INCHES.

1305 HRS T. VARNAR FINISH OBTAINING
SAMPLE S-3 - ALSO OBTAINED
SAMPLE FOR SITE REP.
COOLING WATER ONLY IN SWALE
NOT IN PAST 1.5 YEARS.
NO PHOTO WASTE, PRESENTY ROOF RUNOFF.
T. VARNAR OFF RESPIRATOR

1310 HRS SWALE MEASUREMENTS



E Leonard 7/30/87

BUILD END

S Kennedy
8/4/87

DAYTON T. BROWN 1128187 Ref 9
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1317 HRS BACK TO DECON AREA

1324 HRS BACK AT DECON AREA

1327 HRS HEAD TO ~~LEACHING POOL~~ RECHARGE BASIN #4
BY LAB. BUILDING. T. VARNAR, E. LEONARD
D. DEBRUIJN + R. SINGLE

1331 HRS D. DEBRUIJN ON RESPIRATOR
STARTS SAMPING. S-4
IN RECHARGE BASIN. NO READINGS
ABOVE BACKGROUND ON HNU.

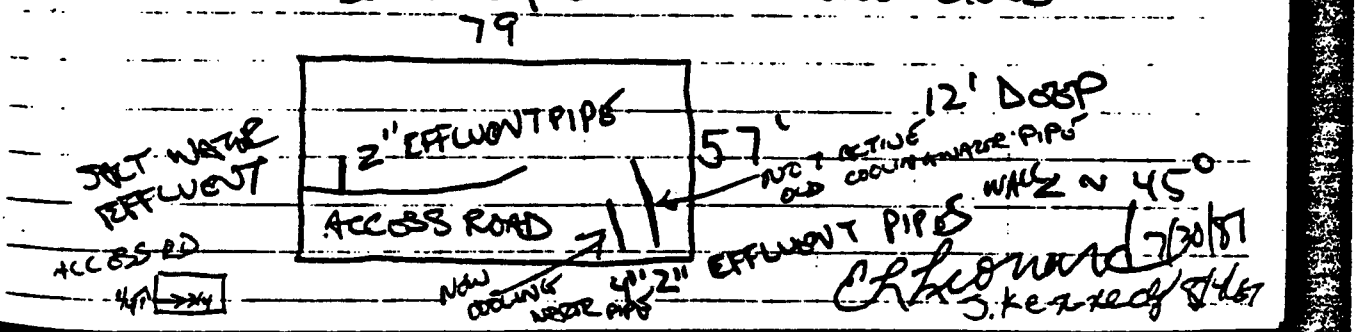
1341 HRS D. DEBRUIJN FINISHING
OBTAINING S-4. ALSO OBTAINED 1-12oz
SAMPLE FOR SITE REP.

1343 HRS D. DEBRUIJN STARTS OBTAINING
EFF-1. ~~SPLIT SAMP~~ TWO 40ml #4
SAMPLES OBTAINED FOR SITE REP

1344 HRS NO READINGS ABOVE BACKGROUND.
ON HNU.

1348 HRS D. DEBRUIJN FINISH
OBTAIN EFF-1. D. DEBRUIJN OFF
RESPIRATOR

1350 HRS ~~LEACH POOL DIMEN~~ #4
RECHARGE BASIN DIMENSIONS



E. Leonard 7/30/87
J. Kennedy 8/4/87

TDD # 02-8703-66

Ref 4
p31 ~~39~~ 15

1400 HRS PRODUCTION WELL FROM SOUTH EAST CORNER OF LAB BUILDING. WELL USED TO RUN LAWN SPRINKLERS. SPINKLERS RAN ALL NIGHT TURNED SPRINKLERS ON & WILL LET RUN ~ 5 MINUTES. D.T. BROWN CALLS IT WELL #3 CASING ~ 60 FEET DEEP
SPRINKLERS RAN ALL NIGHT UNTILL ~ 0700 HRS THIS MORNING.

1405 HRS AFTER RUNNING SPRINKLES AT FULL FORCE FOR ~5 MINUTES STARTED SAMPLING. NO READINGS ABOVE BACKGROUND ON HNU.
~~1406 HRS~~ ZH D. ~~BACK~~ ZH BY TAP DIRECTLY ON WELL HEAD.

1407 HRS SPRINKLERS STILL RUNNING D. DEBRUIJN STARTS OBTAINING TW-1. ~~SPLIT~~ OBTAINED BY SAMPLES ~~WITH~~ ZH FOR B. SINGLE TWO 40 ML VOA.

~~1418 HRS~~
1418 HR D DEBRUIJN FINISHING OBTAINING TW-1

1423 HRS BACK AT DECON AREA PACKING & CLEANING.

EL Leonard 7/30/87 Stennedy 8/4/87

DAYTON T. BROWN 7/30/87 Ref 9
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1430 HRS GIVE R. SINGLE ALL HIS SAMPLES LABLED. TOLD HIM I WOULD STOP BY BEFORE WE LEAVE. STILL PACKING EQ + SAMPLES. I ALSO SUGGESTED TO R. SINGLE THAT HE KEEP SAMPLES COOL. HE SAID HE WOULD KEEP THEM IN HIS OFFICE

1500 HRS MAJORITY OF EQUIPMENT PACKED. & SMO STILL PACKING SAMPLES.

1506 HRS E LEONARD LEAVES TO TAKE PHOTO OF DAYTON T. BROWN SIGNS

1515 HRS E. LEONARD BACK TO DECON AREA.

1530 HRS FINISH PACKING RAS SAMPLES.

1534 HRS E. LEONARD SEE R. SINGLE GIVE LETTER OF INTRODUCTION. TOLD HIM REPORT WOULD BE READY ~~AFTER~~ EH ~ 6 MONTHS

1537 HRS CALLED OFFICE TO CALL IN SAMPLES. SAS LABS NOT AVAILABLE.

1605 HRS FINISH ~~ANT~~ EH PACKING

1617 HRS LEAVE SITE.

Skewney

[signature] 7/30/87 8/4/87

DAYTON T. BROWN
TDD# 02-8703-66

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1636 HRS ARRIVE FED EX

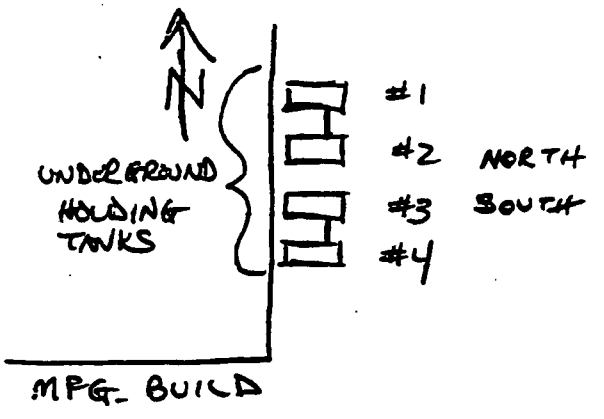
1647 HRS. LEAVE FED EX

GENERAL NOTES

- OBTAINED THE FOLLOWING ADDITIONAL SAMPLES FOR THE SITE REP, AT EACH SAMPLING LOCATION:
  - S1-S4: ONE 12-OZ BOTTLE, AT EACH LOCATION
  - SLU1+SLU2: ONE 12-OZ BOTTLE, AT EACH LOCATION
  - EFF1: TWO 40-ML VOA VILES
  - TW1: TWO 40-ML VOA VILES

- SAMPLES S1, S2, S3, S4, EFF1, TW1, TBLK1, TBLK2, RIN1, RIN2 & RIN3 ~~AR~~ WERE ALL SHIPPED TO THE APPROPRIATE LABS ON 7/28/87. FROM FED EX. SAMPLES SLU1, SLU2 + TBLK3 WILL NOT BE SHIPPED UNTILL 7/29/87 FROM THE OFFICE IN EDISON, NJ. LABS WERE NOT AVAILABLE AS OF 1540 HRS 7/28/87.

-



Ch Leonard 7/30/87 Skeeney 8/4/87

DAYTON T. BROWN
TDD#02-8203-66

7/28/87

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THE TWO ORIGINAL TANKS THAT WERE TO BE SAMPLED WERE #2 (INITIALLY DESIGNATED THE NORTH TANK) & #3 (INITIALLY DESIGNATED THE SOUTH TANK). WHILE ON SITE THE SITE REP STATED THAT THERE WHERE TWO ADDITIONAL UNDERGROUND HOLDING TANKS #1 & #4. THESE TANKS WERE OVER FLOWS FOR THE ORIGINAL TWO TANKS #1 & #2 WERE CONNECTED & #3 # #4 WERE CONNECTED. TOTAL VOLUME FOR ALL 4 TANK IS APPROXIMATELY 10000 - 12000 GALLONS.

[signature] 7/30/87 Skennedy 8/4/87

Ref 1
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DAYTON T. BROWN 7/30/87
TDD # 02-8703-66

CASE # 7765/3181B

SAMP ID #	ORGAN TR #	INORGAN TR #	SAMP TYPE/LOCATION
NYR4-SLU1	BK847	MBL132	SLUDGE. OBTAINED FROM UNDERGROUND HOLDING TANK #3, ON EAST SIDE OF MFG BUILD. ALSO MS/MSD SAMPLE. TIME 1140-1148 HRS.
NYR4-SLU2	BK848	MBL168	SLUDGE OBTAINED FROM UNDERGROUND HOLDING TANK #2, ON EAST SIDE OF MFG BUILDING. ALSO ENVIRONMENTAL DUPLICATE SAMPLE. TIME 1211-1217 HRS
NYR4-TBLK3	BK849	N/A	AQUEOUS TRIP BLANK-SLUDGE

ORGANIC LAB:
AIRBILL # 32335241/
CENTURY REFINING CO.
695 NORTH SEVENTH ST.
BRIGHTON, CO 80601

INORGANIC LAB:
AIRBILL # 32335227/
CHEMTECH CONSULTING GROUP
360 WEST 11TH ST.
NY, NY 10014

EL Leonard 7/30/87 SKEELXCCD 8/4/87

DAYTON T. BROWN 7/29/87 Ref 4 p 36 of 39

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TDD # 02-8103-66

CASE # 7732

SAMP ID #	ORGANIC TR #	INORGANIC TR #	SAMPLE TYPE/LOCATION
NYR4-S1	BK804	MBK670	SOIL. NORTH END OF S.S. SHED 2' WEST OF SHED & 3' NORTH OF WALKWAY. ALSO MS/MSD. SAMPLE. 6-8" Deep. TIME 1022-1033 HRS
NYR4-S2	BK805	MBL124	SOIL. SOUTH END OF S.S. SHED 1' WEST OF SHED & 19' SOUTH OF WALKWAY. ALSO ENVIRONMENTAL DUPLICATE SAMPLE. 6-8" Deep. TIME 1044-1054 HRS
NYR4-S3	BK806	MBL127	SEDIMENT. NORTH END OF SWALE. 98.5' SOUTH OF NORTH WEST CORNER OF MFG. BUILDING. ~ MIDPOINT BETWEEN SWALE SIDES. 12-16" Deep. TIME 1258-1305 HRS
NYR4-S4	BK807	MBL128	SEDIMENT. SOUTH END OF RECHARGE BASIN. ~ 10' NORTH EAST OF EFFLUENT ENTRY POINT. 0-2" Deep/SURFACE TIME 1331-1341 HRS.
NYR4-TW1	BK939	MBK666	TAP WATER. WELL #3 ON EAST SIDE OF LAB BUILDING. ALSO MS/MSD SAMPLE. TIME 1407-1418 HRS.
NYR4-EFF1	BK801	MBK667	EFFLUENT. SOUTH END OF RECHARGE BASIN. ACTIVE 4" DISCHARGE PIPE FROM LAB BUILDING. ALSO ENVIRONMENTAL DUPLICATE SAMPLE. TIME 1343-1348 HRS.

EL Leonard 7/30/~~86~~ 87 EH Skerrett 8/4/87

DAYTON T. BROWN
TDD # 02-8203-66

7/28/87

Ref 4
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30

SAMP ID #	ORGAN. TR #	INORGAN. TR #	SAMPLE TYPE/LOCATION
NYR4-TBLK1	BK518	N/A	AQUEOUS TRIP BLANK - WATER
NYR4-TBLK2	BK519	N/A	AQUEOUS TRIP BLANK - SOIL/SED
NYR4-~~TBLK~~ RIN 1	BK520	MBJ606	AQUEOUS RINSATE BLANK FOR TROWL
NYR4-RIN2	BK521	MBK660	AQUEOUS RINSATE BLANK FOR AUGER
NYR4-RIN3	BK522	MBK663	AQUEOUS RINSATE BLANK FOR DREDGE

ORGANIC LAB:

AIRBILL # 4486829712
ALLIANCE TECHNOLOGIES
213 BURLINGTON RD
BEDFORD, MA 01730

INORGANIC LAB:

AIRBILL # 4486830095
HITTMAN-EBASCO ASSOC INC
9151 RUMSEY ROAD
COLUMBIA, MD 21045

EHLeonard 7/30/87 Skennedy 8/4/87

DAYTON T. BROWN TDD# 02-8703-66 7/28/87

DATE	PHOTOGRAPHER	TIME	ROLL/FR	DESCRIPTION
7/28/87	EH	1030 HRS	~~S1-1~~ EH S1-1 ~~R1-1~~ P1-1	T. VARNAR OBTAINING SAMPLE S-1. NORTHEND OF S.S.S.
7/28/87	EH	1048 HRS	~~S1-P2~~ EH S1-2 ~~R1-P2~~ P1-2	T VARNAR OBTAINING SAMPLE S-2. SOUTH END OF S.S.S
7/28/87	EH	1146 HRS	~~S1-1~~ EH ~~S1-P3~~ EH S1-3 ~~R1-P3~~ P1-3	D. DEBRUIJN OBTAINING SAMPLE SLU-1. TANK #3
7/28/87	EH	1215 HRS	~~S1-P4~~ EH S1-4 ~~R1-P4~~ P1-4	D. DEBRUIJN OBTAINING SAMPLE SLU-2 TANK #2
7/28/87	EH	1303 HRS	S1-5 ~~R1-5~~ EH P1-5	T. VARNAR OBTAINING SAMPLE S-3 IN SWALE.
7/28/87	EH	1320 HRS	S1-6 ~~R1-6~~ EH P1-6	LOOKING SOUTH AT SWALE, BY MFG. BUILD.
7/28/87	EH.	1340 HRS	S1-7 ~~R1-7~~ EH P1-7	D DEBRUIJN OBTAINING SAMPLE S-4 IN ~~RECH COACH~~ POOL RECHARGE BASIN. EH

Ch Leonard 7/30/87

Skenned 8/4/87

Ref 9 P38 of 39

DAYTON T. BROWN TDD # 02-8703.66 7/28/87

DATE	PHOTO-GRAPHER	TIME	ROLL/FR	DESCRIPTION
7/28/87	EH	1346 HRS	S1-8 ~~R1-8~~ P1-8 EH	D. DEBRUIJN OBTAINING SAMPLE EFF-1. FROM ~~EH LEACH~~ RECHARGE BASIN ~~POOL~~ EH FROM ACTIVE DISCHARGE PIPE (4")
7/28/87	EH	1352 HRS	S1-9 ~~R1-9~~ EH P1-9	VIEW OF ~~LEACH POOL~~ RECHARGE BASIN EH BY LAB BUILDING, LOOKING NORTH.
7/28/87	EH	1356 HRS	S1-10 ~~R1-10~~ EH P1-10	VIEW OF RECHARGE BASIN BY LAB BUILDING, LOOKING SOUTH
7/28/87	EH	1411 HRS	~~R1-11~~ EH S1-11 P1-11	D. DEBRUIJN OBTAINING SAMPLE TW1, FROM WELL #3
7/28/87	EH	1508 HRS	~~R1-12~~ EH P1-12 ~~S1~~ EH S1-12	SIGN TO PARKING LOT STATING D.T. BROWN
7/28/87	EH	1513 HRS	~~R1-13~~ EH P1-13 S1-13	D.T. BROWN ABOVE THE ENTRANCE TO THE MFG. BUILDING.

C. Leonard 7/30/87 Swanbeard 8/4/87

Ref 9 P593 39

Reference 10

Ref-10
p. 1 of 1

RECORD OF TELEPHONE CONVERSATION

Charge Number:	Date:	Time:
8310 0076 000060002	8/2/95	1000
Name of Contact:	**Organization:**	**Telephone Number:**
Al Reed	Real Properties Tax office	516 852-1557

Subject: Dayton T. Brown Property

Summary:

I called Regarding a descrepancy in the acreage of the site. Mr. Reed indicated that the tax map was correct and the site is 26.8 acres and has not been subdivided.

Action Required:

By:	Signature:	Title/ Department:
Chris Kovari	Kovari	Taskleader / EC

Reference 11

Ref 11
p. 1 of 4

Dayton T. Brown, Inc.

Founded 1950

CHEMICAL
AND
HAZARDOUS WASTE
EMERGENCY CONTINGENCY PLAN

for

Dayton T. Brown, Inc.
535 Church Street
Farmingdale, New York 11710
(516) 589-6300
EPA ID #D002050177

Ref 11
p. 2 of 4

Dayton T. Brown, Inc.
555 Church Street
Bohemia, NY 11716
(516)589-6300
EPA ID# NYD 002050177

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PART I

GENERAL

1. FACILITY DESCRIPTION

Dayton T. Brown, Inc. (DTB) is located at 555 Church Street, Bohemia, NY 11716. It consists of two major buildings and three smaller outbuildings.

The west building is the Manufacturing Division. This building houses EDP, Accounting. Personnel, Manufacturing Sales and the Cafeteria in the front offices. The remainder of the building houses sheet metal forming equipment, paint shop, plating area and raw material and waste storage areas. A detailed floor layout of this building can be found at "Exhibit A".

The east building is the Engineering & Test Division. This building houses executive offices, Purchasing and Engineering sales in the front offices. The remainder of the first floor houses the various testing and test stand fabrication area along with the photo lab. The second floor of this building houses Engineering, Technical Writing and Illustrating. A detailed floor plan of the first floor of the building can be found at "Exhibit B".

The brick building to the rear (north) of the Engineering & Test Division building is known as the Remote Building. It houses armament testing facilities.

The large metal Quonset hut building located in the rear (north east) of the Engineering and Testing building is known as the Wonder Building. It serves as general storage and also as the storage area for the Engineering & Test Division's raw material and used oils and acid.

2. DIRECTIONS TO DAYTON T. BROWN, INC.

Dayton T. Brown, Inc. is located on Church Street between Johnson and Lakeland Avenues in Bohemia. Church Street is north of Sunrise Highway and runs parallel to it. On the southwest corner of the Engineering & Test Division building there is a guard booth. This booth is manned 24 hours a day, 365 days a year. The emergency coordinator will meet all emergency response teams at this location. "Exhibit C" map depicts DTB location. "Exhibit B", DTB guard booth location.

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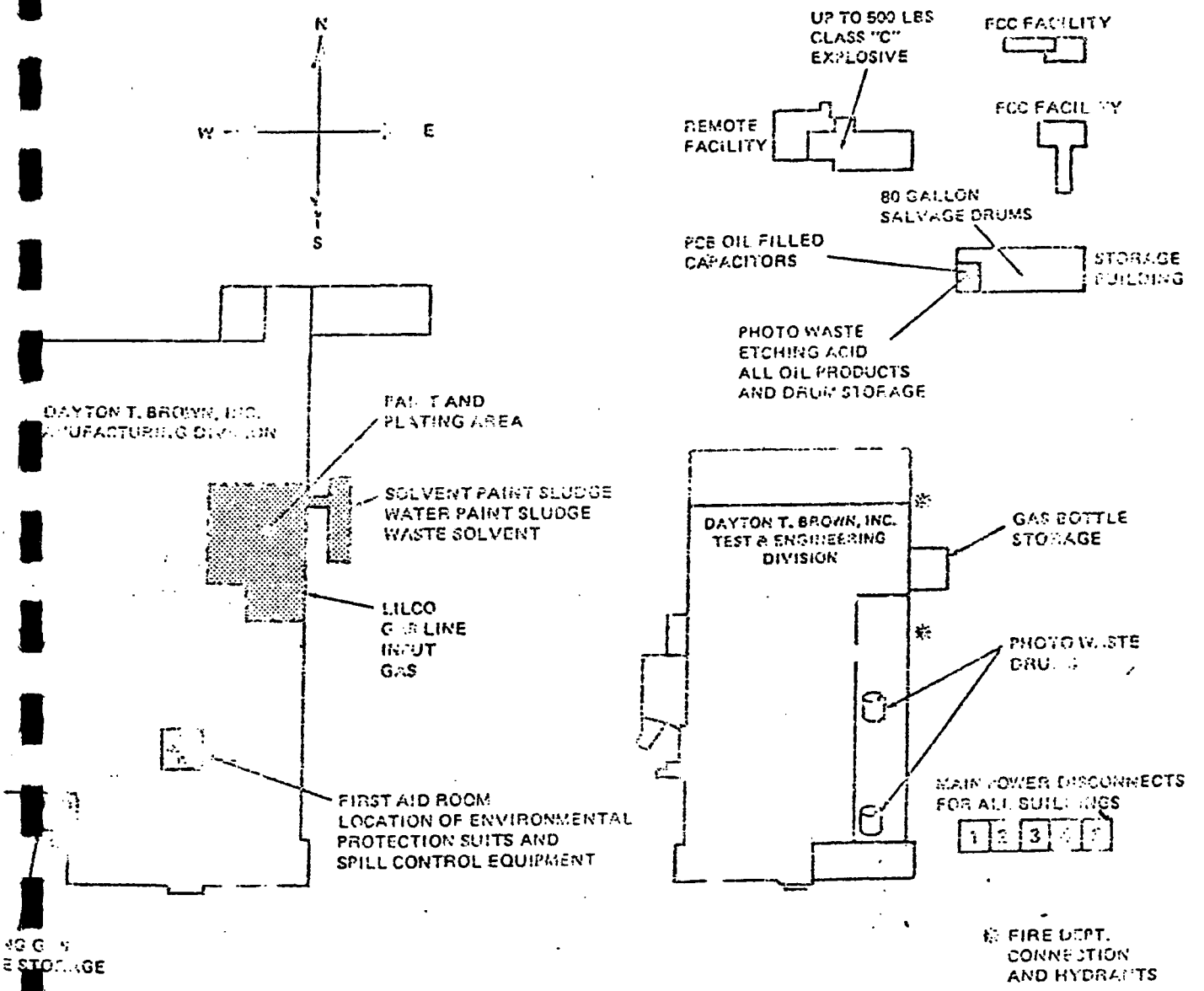
p. 4 of 4



FRONT LAWN TO BE USED AS AN
ASSEMBLY POINT FOR ALL
PERSONNEL IN THE EVENT OF
A BUILDING EVACUATION.

Reference 12

Ref 12
D. 1 of 3

DAYTON T. BROWN INC.
Founded 1950

CHURCH STREET • BOHEMIA, LONG ISLAND, NEW YORK 11716
AREA CODE 516 589-6300
TWX: 510-228-7323
TELEX: 96-1336

95-HR-110

September 22, 1995

Foster Wheeler Environmental Corporation
(Ehosco Service, Inc.)
1290 Wall Street West
Lyndhurst, New Jersey 07071-0661

Attn: Christine Kovari

Dear Ms. Kovari:

Here are the answers to the questions you raised:

1. There are no sewers on site.

2. Building 5 - FCC field testing facility
Building 6 - Equipment storage (old FCC facility)
Building 7 - To the best of my knowledge no building or facility ever existed at location number 7.
Building 8 - This is not a building. It is a weather protection cover for the end of a small catapult.

3. These were leaching pools that were supposedly modified into holding tanks by having the bottoms and slots filled with concrete. While in use there was no reason to suspect this was not the case because water had to be pumped from them and disposed of on a regular basis. When we began the removal process it was discovered that no modification had taken place. The slots had been sealed by the floculated material in the water. Upon learning of this we began the closure process in conjunction with the Suffolk County Department of Health Services. This was an extensive process involving sampling by SCDHS, soil removal, additional sampling, additional soil removal from the pool perimeters and final approval by SCDHS for closure.

4. There are approximately 420 employees.

5. Sample results are included in the attached report.

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p. 2 of 3

DAYTON T. BROWN INC.
Founded 1950

6. The swale on the west side of the manufacturing building is only used for storm water run off from roof drains.

7. We have permitted storage areas with a total capacity of 13,200 gallons (240 drums). These areas contain paint, paint sludge, plating sludge, cutting oil, paint thinner, acid and hydraulic oils.

8. SPDES - Our SPDES permit was for the discharge of tertiary photo rinse water. This discharge was eliminated in early 1995 when we switched over to an all digital photography system.

   There is no longer any process discharge from our facility. All material generated at our facility is stored in drums and disposed of in accordance with local, state and federal regulations.

   Plating waste water and suspended solids are removed from our process tanks by truck and taken to treatment facilities. Any remaining sludge is placed in fifty-five gallon drums for disposal.

   The plating process currently is an ammonia zinc chloride process. It may have been a cyanide zinc plating process years ago. We also have an aluminum etch and irridite process.

   There has been no plating discharge from our facility since 1984.

   Other waste generated at our facility is water based paint sludge, small amounts of paint thinner, etching acid, and hydraulic oils. The quantity fluctuates depending on the contracts we have. The following amounts are yearly estimates.

Ref 12
P. 3 of 3

DAYTON T. BROWN INC.
Founded 1950

Waste oil - 750-1000 gallons per year
Plating waste water - 4000 to 7000 gallons per year
Plating sludge - 50 to 200 gallons per year
Etching acid - 100 to 400 gallons per year
Paint thinner - 200 to 500 gallons per year
Paint - 100 to 500 gallons per year

Enclosed you will find copies of our closure plan and related documents. Please feel free to contact me if you have any questions.

Very truly yours,

DAYTON T. BROWN, INC.

Robert C. Single
Vice President

RCS/bt
Enc.
1. Decommissioning Plan
2. Final Closure Report
3. SCDHS Closure Approval letter

Reference 13

Ref 13
p.1 of 3

RECEIVED
JUN 22 1992
S.C. DEPT. OF HEALTH SERVICES

GROUNDWATER TECHNOLOGY

Groundwater Technology, Inc.
101-3 Colin Drive, Holbrook, NY 11741
Tel: (516) 472-4000 Fax: (516) 472-4077

June 17, 1992

Refer: 01113-5050

Mr. Steven Cary
Suffolk County Department of Health Services
Bureau of Drinking Water
225 Rabro Drive East
Hauppauge, New York 11788

Subject: Dayton T. Brown, Bohemia, New York

Dear Mr. Cary,

I am writing to respond to your comments of May 14, 1992 regarding the installation of monitoring wells at the above referenced site.

Comment 1:
The southwest corner of Dayton T. Brown's property is on Church Street, Bohemia, 1,141 feet east of the intersection of Lakeland Avenue. A portion of the Patchogue, New York USGS quad map (7½ minute series) showing the site location is enclosed. Also enclosed is a site plan which indicates locations of the facility, the drywell, proposed monitoring wells, and the Church Street supply well field.

Adjacent land uses are an industrial park to the north extending to Veteran's Memorial Highway; a pre-cast cement plant to the east; residential to the south; and commercial to the west (I.W. Grainger). The residential occupancies are downgradient. The SCWA Church Street supply well field is approximately 1,070 feet east and 500 feet south of the suspect drywell.

Comment 2:
Dayton T. Brown purchased the vacant land in 1958, constructed Building 1, and opened this building in 1966. There has never been another tenant.

The company manufactures sheet metal cabinets for electronic equipment. Manufacturing operations have always included plating and painting, although the nature of these operations has changed. Plating using chromium and cyanide salts was previously conducted; the only plating related activity currently conducted is light irriditing.

Ref 13
p. 2 of 3

The actions set forth in Groundwater Technology, Inc.'s (Groundwater Technology's) May 8, 1992 correspondence were requested by Mr. Dennis Gobbi of SCDHS in a letter dated April 18, 1991 as a result of his department's field observation and sampling of two industrial leaching pools. Those observations included blue colored soil infiltrating the rings during cleanout operations. County sampling results indicated presence of metals and on that basis they requested soil excavation, borings, monitoring wells, and sampling utilizing EPA Methods 601/602 for analysis.

Comment 3:
No specific information is available with regard to piping layout. The best available information from Dayton T. Brown is that these drywells were fed from the zinc plating and old painting areas. Plating water rinses from zinc plating operations were discharged to these pools from 1966 to 1984. Water from the spray paint waterfall was discharged from 1966 to 1978.

Drywell cleanouts were performed by Enroserv and RGM between February 27 and March 6, 1991. The walls were pressure washed. 50 yards of waste water and sludge were disposed of as F008 waste.

Comment 4:
The SCWA supply wells are more than 1,000 feet east of the site. Expected groundwater flow direction is to the southwest. MW-4 has been located on a direct line between the drywell and the supply well for the purpose of measuring effects of any possible drawdown.

Comment 5:
The proposed location of MW-2 will be shifted slightly to the west, consistent with access and proximity to Building 1 so as to be more nearly downgradient from the drywells. Split spoon samples will be taken and analyzed for 601/602 and 13 priority pollutant metals at five foot intervals.

Comment 6:
SCDHS will be advised two days prior to any sampling activities. This letter should be considered an addendum to that of May 8, 1992.

Ref 13
p. 3 of 3

Please feel free to contact me if you have any questions. We will schedule the work as soon as we receive your approval.

Sincerely,

GROUNDWATER TECHNOLOGY, INC.

Ken Brooks

Kenneth L. Brooks, P.E.
Project Manager

enclosure
cc: R. Single (Dayton T. Brown)
D. Gobbi (SCDHS)
F. Randall (SCDHS)
File

KLB:kmr
daytont.brown/ltr615.92

GROUNDWATER TECHNOLOGY

Reference 14

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
EDISON, NEW JERSEY 08817

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

Site Name: Dayton T. Brown

Address: 555 Church Street, Bohemia, NY 11716

County: Suffolk

EPA I.D. No.: NYD002050177

Summary:

Dayton T. Brown is a currently active industrial facility. Operations are divided into two divisions: manufacturing (the production of sheet metal cabinets) and industrial research and development. Hazardous waste is produced from the plating of metal parts, the painting of products, and photo processing.

A recharge sump located to the east of the building has been used to discharge photo processing rinse water. Testing of the sump on January 25, 1984 revealed high concentrations of silver, lead, and copper. Varying concentrations of trichloroethylene, 1,1,1-trichloroethane, and tetracholoroethylene have also appeared in this water. Two concrete in-ground holding tanks are also present east of the building. These were used to store metal plating wastewater. The tanks still contain a sludge, which most likely contains a high concentration of metals.

Priority for Inspection: High ___
Medium X
Low ___
None ___

Recommendations:

The groundwater in the Bohemia area just west of Dayton T. Brown is already known to be contaminated with chloroform (a well field on Locust Ave. has been closed). The company itself had to stop using an on-site well because of contamination with 1,1,1-trichloroethane. Because of the above problems, and Suffolk County's dependency on groundwater, the site should be evaluated.

Sampling areas should include the discharge to the recharge sump, sludge from the holding tanks, the closed plant well (if possible) and any other nearby wells. Soil around the above areas should also be sampled. Samples should be analyzed for organics and metals.

Prepared by: Carol Price, Environmental Scientist
U.S. EPA, Environmental Services Division

Date: October 17, 1986

Ref 14
p. 1 of 2

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D002050177

II. SITE NAME AND LOCATION

01 SITE NAME	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Dayton T. Brown	555 Church Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Bohemia	NY	11716	Suffolk	103	1

09 COORDINATES LATITUDE	LONGITUDE
40 46 15.__	__73 06 00.__

10 DIRECTIONS TO SITE
Take the Sunrise Highway east to Lakeland Avenue. Make left onto Lakeland Avenue. Make first right from Lakeland Avenue onto Church Street. Continue along Church Street until reaching site.

III. RESPONSIBLE PARTIES

01 OWNER	02 STREET
Dayton T. Brown (Corporation)	555 Church Street

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Bohemia	NY	11716	(516) 589-6300

07 OPERATOR	08 STREET
Tony Donato/Robert Single	555 Church Street

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Bohemia	NY	11716	(516) 389-6300

13 TYPE OF OWNERSHIP
☒ A. PRIVATE ☐ B. FEDERAL: _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE
☒ A. RCRA 3001 DATE RECEIVED: 8/8/80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES DATE 11,26,85 (MONTH DAY YEAR)
☐ NO
7/24/85
~~8/11/82~~

BY
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☒ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____
CONTRACTOR NAME(S): _____

02 SITE STATUS
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1960 (BEGINNING YEAR) | Current (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Silver, lead, copper, and some solvents were found in the effluent being discharged to a recharge sump. Two unused inground holding tanks containing metallic sludge from metal plating operations are located on site.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Groundwater contamination may be present from the contaminants found in the water discharged to the recharge sump. The potential for contamination exists from possible leaks in the inground tanks holding metallic sludge waste. Suffolk County is highly dependent on groundwater as a drinking supply.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION
☐ A. HIGH ☒ B. MEDIUM ☐ C. LOW ☐ D. NONE

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Diana Messina	EPA/ESD/SMB/Superfund Support Section	(201) 321-6776

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Carol Price	EPA	ESD/SMB/Superfund	201-321-6711	10/17/86 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

Reference 15

~~CON~~TINUED: INSPECTORS OBSERVATIONS OR INTERVIEWS

Ref 15
p. 1 of 1

11 MAR 91

DAYTON: T BROWN EAC#5-0387
CHURCH ST (T5-90-1823)
BOHEMIA

POST PUMP OUT SAMPLES

- WITH R. SINGLE PRESENT PROCEED TO OBTAIN SLUDGE SAMPLES FROM BOTTOMS OF 2 LEACHING POOLS WHICH HAD BEEN PUMPED & SAMPLED BY VOLUMETRIC TECHNIQUES ON THURS. 7 MAR. THIS DATE ASSISTED BY W. PETRULE & D. GOBBI USING STANDARD PROTECTIVE EQUIPT & CLOTHING.

1 BR3-11 (1ST P) — SLUDGE SAMPLES OBTAIN VIA DREDGE AT LEAST 3-RINGS BELOW GRADE — LIQUID REMAINED IN BOTTOM
SOUTH 2ND POOL
100' OF BLDG
20' N LOADING DOCK
- METALS/CM/HEX-CH

2 BR3-11 (2ND P) — SLUDGE FROM 1 FT HOLE DUG IN BOTTOM AT LEAST 3-RINGS BELOW GRADE — BOTTOM WAS DRY/H_2O SEEPED INTO HOLE.
NORTH 1ST POOL
100' OF BLDG
20' N OF LOADING DOCK
- ENTRY MADE VIA LADDER TO SAFETY LINE
- METALS/CM/HEX-CH.

- BOTH POOLS WERE FORMERLY CONNECTED TO INTERIOR PLATING OPERATION DISCHARGE COLLECTION SYSTEM AND ARE ~~REGIST~~ REGISTERED AS STEEL TANKS.
- SAMPLES TRANSPORTED DIRECTLY TO LAB FOR SIGN-IN. ASKED FOR RUSH ON ANALYSIS.

B ROBINSON

NOTE - ATTACHED ARE SAMPLE RESULTS OF SAMPLES TAKEN BY VOLUMETRICS TECHNIQUES ON DAY OF PUMP-OUT

BR

Reference 16

91-20-2 (1/89)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

State Pollutant Discharge Elimination System (SPDES)

DISCHARGE PERMIT

Special Conditions (Part I)

Reference No. 5-0631

Ref to SG 12/13/93

Industrial Code:	7395	SPDES Number:	NY-0075809
Discharge Class (CL):	01	DEC Number:	1-4728-00458/00001-0
Toxic Class (TX):	T	Effective Date (EDP):	02 /01 /92
Major Drainage Basin:	17	Expiration Date (ExDP):	02 /01 /97
Sub Drainage Basin:	01	Modification Date(s):	
Water Index Number:	Groundwater	Attachment(s):	General Conditions (Part II) Date: 11/90
Compact Area:			

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act as amended, (33 U.S.C. Section 1251 et. seq.)(hereafter referred to as "the Act").

PERMITTEE NAME AND ADDRESS Attention: Robert C. Single

Name: Dayton T. Brown, Inc
Street: 555 Church Street
City: Bohemia State: NY Zip Code: 11716

is authorized to discharge from the facility described below:

FACILITY NAME AND ADDRESS

Name: Dayton T. Brown, Inc
Location (C,T,V): Islip (T) County: Suffolk
Facility Address: 555 Church Street
City: Bohemia State: NY Zip Code: 11716
NYTM - E: . NYTM - N: 4 .
From Outfall No.: 001 at Latitude: 40° 46′ 00″ & Longitude: 73° 06′ 00″
into receiving waters known as: Groundwater Class: GA

and; (list other Outfalls, Receiving Waters & Water Classifications)

002.003,004 Groundwater
005,006.007 Groundwater

Suffolk County Tax Map #'s:

Dist 500 Block 01
Sect. 214 Lot 001

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in Special Conditions (Part I) and General Conditions (Part II) of this permit.

DISCHARGE MONITORING REPORT (DMR) MAILING ADDRESS

Mailing Name: Dayton T. Brown, Inc
Street: 555 Church Street
City: Bohemia State: NY Zip Code: 11716
Responsible Official or Agent: Robert C. Single Phone: (516)589-6300

This permit and the authorization to discharge shall expire on midnight of the expiration date shown and the permittee shall not discharge after the expiration date unless this permit has been renewed, or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for a permit renewal no less than 180 days prior to the expiration date shown above.

DISTRIBUTION: R. Hannaford
R. Schneck
J. Maloney
A. Yerman

Deputy Regional
Permit Administrator: David DeRidder
Address: SUNY Bldg. 40
Stony Brook, NY 11790-2356
Signature: David DeRidder Date: 1 /9 /92

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 1, 1992

and lasting until February 1, 1997

the discharges from the permitted facility shall be limited and monitored by the permittee as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations Daily Avg.	Daily Max.	Units	Minimum Monitoring Requirements Measurement Frequency	Sample Type
Lab Building Outfalls					
001 - Photo Rinsewater					
Flow	500		GPD	Continuous	Recorded
Silver, Total	NA	.1	mg/l	Monthly	Grab
Phenols (total)	NA	.002	mg/l	Monthly	Grab
pH (Range)*		6.5 - 8.5	SU	Monthly	Grab
Methylene Chloride	NA	.005	mg/l	Monthly	Grab
Lead, Total	NA	.05	mg/l	Monthly	Grab
Copper	NA	1.0	mg/l	Monthly	Grab
Iron	NA	0.6	mg/l	Monthly	Grab
Nitrogen (total)	NA	10.0	mg/l	Monthly	Grab
002 - Sanitary Waste Only (2400 GPD) No Monitoring Required					
003 - Non Contact Cooling Water- 600 GPD No Monitoring Required					
Manufacturing Building Outfalls					
004 - Non Contact Cooling Water and Stormwater Runoff					
Flow	NA	5000	GPD	Monthly	Meter
pH (Range)*		6.5 -8.5	SU	Monthly	Grab
005 - Sanitary Waste Only (1500 gpd) No Monitoring Required					
006 - Sanitary Waste Only (1000 gpd) (Lab Building) No Monitoring Required					

NOTE: There shall be no connections of lab sinks or floor drains to any sanitary system. Discharge of any glassware or lab equipment wash to a sanitary system is prohibited.

*** When the natural groundwater exceeds the allowable pH range, the Natural pH may be an allowable limit extreme for outfalls 001 and 004. The water may be discharged at ambient pH providing that the Permittee supplies incoming water ph values with each Discharge Monitoring Report (DMR).**

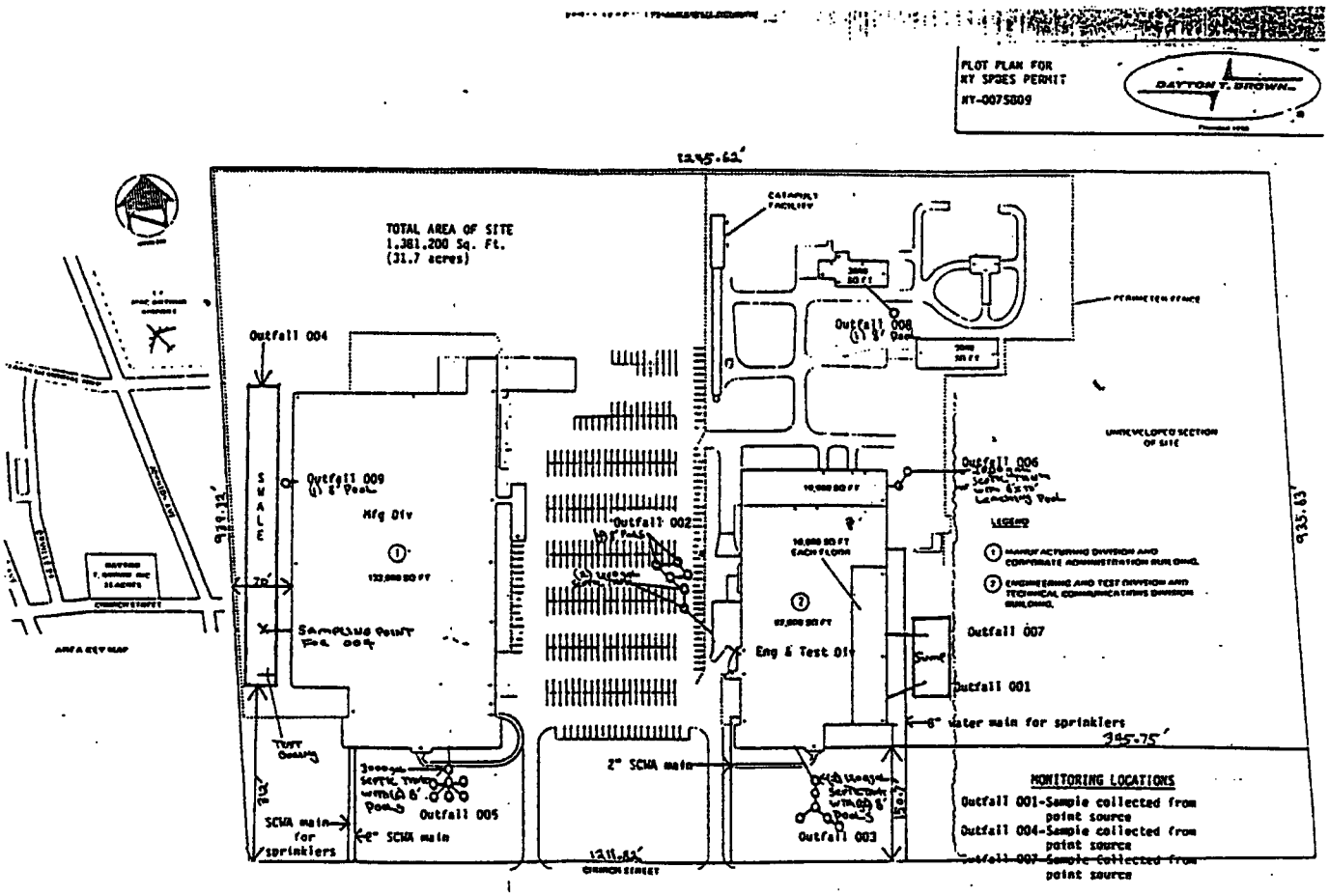
DEFINITIONS OF DAILY AVERAGE AND DAILY MAXIMUM

The daily average discharge is the total discharge by weight or in other appropriate units as specified herein, during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges in appropriated units as specified herein divided by the number of days during the calendar month when measurements were made.

The daily maximum discharge means the total discharge by weight or in other appropriate units as specified herein, during any calendar day.

MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) indicated below: (Show sampling locations and outfalls with sketch or flow diagram as appropriate)



Reference 17

Ref. 17
p. 1 of 168

- Copy of CLP Data
(Redlined & marked)

- Computer QA'd printout

Site Name: DAYTON T. BROWN, INC.
Case : 7732
Brics #: NYR4
TDD #: C2-8703-66

[redacted]TE NO[redacted]TON T[redacted] INC. [redacted]
TDD#: 02-8703-66
SAMPLING DATE: 7/28/87
EPA CASE NO.: 7732 LAB: ALLIANCE/CENREF

VOLATILES													
Sample ID No.	NYR4-S1(MS/MSD)	NYR4-S2(DUP)	NYR4-S3	NYR4-S4	NYR4-TW1(MS/MSD)	NYR4-EFF1(DUP)	NYR4-SLU1(MS/MSD)	NYR4-SLU2(DUP)	NYR4-RIN1	NYR4-RIN2	NYR4-RIN3	NYR4-TBLK1	NYR4-TBLK2	NYR4-TBLK3
Traffic Report No.	BK804	BK805	BK806	BK807	BK939	BK801	BK847	BK848	BK520	BK521	BK522	BK518	BK519	BK849
Matrix	SOIL	SOIL	SEDIMENT	SEDIMENT	TAP WATER	WATER	SLUDGE	SLUDGE	WATER	WATER	WATER	N/A	N/A	N/A
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor	5	5	5	5	1	1	3.4	3.8	1	1	1	1	1	1
Percent Moisture	2.2	7	4.1	16.9	--	--	71	74	--	--	--	--	--	--
Chloromethane														
Bromomethane														
Vinyl Chloride														
Chloroethane														
Methylene Chloride	13	15	8	18										
Acetone							R	R						R
Carbon Disulfide							R		44	117	53			65 E
1,1-Dichloroethene														
1,1-Dichloroethane														
Trans-1,2-Dichloroethene (total)														
Chloroform														
1,2-Dichloroethane														
2-Butanone														
1,1,1-Trichloroethane									24	22	30			38 E
Carbon Tetrachloride														
Vinyl Acetate														
Bromodichloromethane														
1,2-Dichloropropane														
cis-1,3-Dichloropropene														
Trichloroethene														
Dibromochloromethane						J								
1,1,2-Trichloroethane														
Benzene														
trans-1,3-Dichloropropene														
Bromoform														
4-Methyl-2-Pentanone														
2-Hexanone							49							
Tetrachloroethene														
Toluene							360	(J)						
1,1,2,2-Tetrachloroethane					J	J	R		J	J	J		J	J
Chlorobenzene														
Ethylbenzene														
Styrene							49							
Xylenes (Total)					1									

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of a compound, but can't be identified
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >10%

Ref. 17
P. 2 of 168

[redacted]ITE N[redacted]YTON T[redacted], INC.
TDD#: 02-8703-66
SAMPLING DATE: 7/28/87
EPA CASE NO.: 7732 LAB: ALLIANCE/CENREF

SEMI-VOLATILES														
Sample ID No.	NYR4-S1(MS/MSD)	NYR4-S2(DUP)	NYR4-S3	NYR4-S4	NYR4-TW1(MS/MSD)	NYR4-EFF1(DUP)	NYR4-SLU1(MS/MSD)	NYR4-SLU2(DUP)	NYR4-RIN1	NYR4-RIN2	NYR4-RIN3	NYR4-TBLK1	NYR4-TBLK2	NYR4-TBLK3
Traffic Report No.	BK804	BK805	BK806	BK807	BK939	BK801	BK847	BK848	BK520	BK521	BK522	BK518	BK519	BK849
Matrix	SOIL	SOIL	SEDIMENT	SEDIMENT	TAP WATER	WATER	SLUDGE	SLUDGE	WATER	WATER	WATER	N/A	N/A	N/A
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	2	2	1	1	2	2	17	19	2	2	2	N/A	N/A	N/A
Percent Moisture	2.2	7	4.1	16.9	--	--	71	74	--	--	--	N/A	N/A	N/A
Phenol	J	J			J		6900 E					NR	NR	NR
bis(2-Chloroethyl)ether							R					NR	NR	NR
2-Chlorophenol							R					NR	NR	NR
1,3-Dichlorobenzene							R					NR	NR	NR
1,4-Dichlorobenzene							R					NR	NR	NR
Benzyl alcohol							R					NR	NR	NR
1,2-Dichlorobenzene							R					NR	NR	NR
2-Methylphenol							R					NR	NR	NR
bis(2-Chloroisopropyl)ether							R					NR	NR	NR
4-Methylphenol	J						R					NR	NR	NR
N-Nitroso-di-n-dipropylamine							R					NR	NR	NR
Hexachloroethane							R					NR	NR	NR
Nitrobenzene							R					NR	NR	NR
Isophorone	J	J					R					NR	NR	NR
2-Nitrophenol							R					NR	NR	NR
2,4-Dimethylphenol							R					NR	NR	NR
Benzoic acid	J	J					4000 E	J				NR	NR	NR
bis(2-Chloroethoxy)methane							R					NR	NR	NR
2,4-Dichlorophenol							R					NR	NR	NR
1,2,4-Trichlorobenzene							R					NR	NR	NR
Naphthalene	J						J					NR	NR	NR
4-Chloroaniline							R					NR	NR	NR
Hexachlorobutadiene							R					NR	NR	NR
4-Chloro-3-Methylphenol							R					NR	NR	NR
2-Methylnaphthalene	J	J					J					NR	NR	NR
Hexachlorocyclopentadiene							R					NR	NR	NR
2,4,6-Trichlorophenol							R					NR	NR	NR
2,4,5-Trichlorophenol							R					NR	NR	NR
2-Chloronaphthalene							R					NR	NR	NR
2-Nitroaniline							R					NR	NR	NR
Dimethylphthalate							R					NR	NR	NR
Acenaphthylene							R					NR	NR	NR
2,6-Dinitrotoluene							R					NR	NR	NR
3-Nitroaniline							R					NR	NR	NR
Acenaphthene							R					NR	NR	NR
2,4-Dinitrophenol							R					NR	NR	NR
4-Nitrophenol							R					NR	NR	NR
Dibenzofuran							R					NR	NR	NR
2,4-Dinitrotoluene							R					NR	NR	NR
Diethylphthalate							R					NR	NR	NR
4-Chlorophenyl-phenyl ether							R					NR	NR	NR
Fluorene							R					NR	NR	NR
4-Nitroaniline							R					NR	NR	NR
4,6-Dinitro-2-methylphenol							R					NR	NR	NR
N-nitrosodiphenylamine							R					NR	NR	NR
4-Bromophenyl-phenyl ether							R					NR	NR	NR
Hexachlorobenzene							R					NR	NR	NR

Ref. 17
P. 3 of 168

SITE NAME: DAYTON T. BROWN, INC.
TDD#: 02-8703-66
SAMPLING DATE: 7/28/87
EPA CASE NO.: 7732 LAB: ALLIANCE/CENREF

PESTICIDES														
Sample ID No.	NYR4-S1(MS/MSD)	NYR4-S2(DUP)	NYR4-S3	NYR4-S4	NYR4-TW1(MS/MSD)	NYR4-EFF1(DUP)	NYR4-SLU1(MS/MSD)	NYR4-SLU2(DUP)	NYR4-RIN1	NYR4-RIN2	NYR4-RIN3	NYR4-TBLK1	NYR4-TBLK2	NYR4-TBLK3
Traffic Report No.	BK804	BK805	BK806	BK807	BK939	BK801	BK847	BK848	BK520	BK521	BK522	BK518	BK519	BK849
Matrix	SOIL	SOIL	SEDIMENT	SEDIMENT	TAP WATER	WATER	SLUDGE	SLUDGE	WATER	WATER	WATER	N/A	N/A	N/A
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/kg	ug/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	5	2	1	1	5	1	10	10	1	1	1	N/A	N/A	N/A
Percent Moisture	2.2	7	4.1	16.9	--	--	71	74	--	--	--	N/A	N/A	N/A
alpha-BHC	R	R	R	R										
beta-BHC	R	R	R	R								NR	NR	NR
delta-BHC	R	R	R	R								NR	NR	NR
gamma-BHC (Lindane)	R	R	R	R								NR	NR	NR
Heptachlor	R	R	R	R								NR	NR	NR
Aldrin	R	R	R	R								NR	NR	NR
Heptachlor epoxide	R	R	R	R								NR	NR	NR
Endosulfan I	R	R	R	R								NR	NR	NR
Dieldrin	R	R	R	R								NR	NR	NR
4,4'-DDE	R	R	R	R								NR	NR	NR
Endrin	R	R	R	R								NR	NR	NR
Endosulfan II	R	R	R	R								NR	NR	NR
4,4'-DDD	R	R	R	R								NR	NR	NR
Endosulfan sulfate	R	R	R	R								NR	NR	NR
4,4'-DDT	R	R	R	R								NR	NR	NR
Methoxychlor	R	R	R	R								NR	NR	NR
Endrin ketone	R	R	R	R								NR	NR	NR
alpha-Chlordane	R	R	R	R								NR	NR	NR
gamma-Chlordane	R	R	R	R								NR	NR	NR
Toxaphene	R	R	R	R								NR	NR	NR
Aroclor-1016	R	R	R	R								NR	NR	NR
Aroclor-1221	R	R	R	R								NR	NR	NR
Aroclor-1232	R	R	R	R								NR	NR	NR
Aroclor-1242	R	R	R	R								NR	NR	NR
Aroclor-1248	R	R	R	R								NR	NR	NR
Aroclor-1254	R	R	R	R								NR	NR	NR
Aroclor-1260	R	R	R	R								NR	NR	NR

NOTES:
Blank space - compound analyzed for but not detected
B - compound found in lab blank as well as sample, indicates possible/probable blank contamination
E - estimated value
J - estimated value, compound present below CRQL but above IDL
R - analysis did not pass EPA QA/QC
N - Presumptive evidence of the presence of a compound, but can't be identified
NR - analysis not required
Detection limits elevated if Dilution Factor 11 and/or percent moisture 10%

Ref. 17
P.5 of 168

SITE NAME: DAYTON T. BROWN, INC.
TDD[redacted]03-68[redacted]
SAMPLING DATE: 7/28/87
EPA CASE NO.: 7732
LAB NAME: HITTMAN/CHEMTECH

INORGANICS

Sample ID No.	NYR4-S1(MS/MSD)	NYR4-S2(DUP)	NYR4-S3	NYR4-S4	NYR4-TW1(MS/MSD)	NYR4-EFF1(DUP)	NYR4-SLU1(MS/MSD)	NYR4-SLU2(DUP)	NYR4-RIN1	NYR4-RIN2	NYR4-RIN3	NYR4-TBLK1	NYR4-TBLK2	NYR4-TBLK3
Traffic Report No.	MBK670	MBL126	MBL127	MBL128	MBK666	MBK667	MBL132	MBL168	MBJ606	MBK660	MBK663	N/A	N/A	N/A
Matrix	SOIL	SOIL	SOIL	SOIL	WATER	WATER	SOIL	SOIL	WATER	WATER	WATER	N/A	N/A	N/A
Units	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	ug/L	mg/kg	mg/kg	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Aluminum	4390	4190	1120	1370			50500	44400						
Antimony						R			J		J	NR	NR	NR
Arsenic					R	R								
Barium	J	J		J					R	R	R	NR	NR	NR
Beryllium	J	J	R	R	R	R	40.6	36.7						
Cadmium							2250	2140	R	R	R	NR	NR	NR
Calcium							J	3.2						
Chromium	R	R	R		R	R	194 E	94.2 E				NR	NR	NR
Cobalt	10	7.4	R	J	R	R	12600	5740	J	J	J	NR	NR	NR
Copper	J	J					43100	27000	J	J	J	NR	NR	NR
Iron	J	J	J	103	57	111	J	J				NR	NR	NR
Lead	7220	6360	1530	2210	R	R	3060	3680	J		J	NR	NR	NR
Magnesium	R	R	R	R	R	R	122000	79700	R	R	R	NR	NR	NR
Manganese	J	J	R	R	J	J	1290 E	575 E	R	R	R	NR	NR	NR
Mercury	181	150	40	52	J	612	J	J	R	R	R	NR	NR	NR
Nickel		0.1 E					628	318				NR	NR	NR
Potassium	J	J	J	J	J	J						NR	NR	NR
Selenium	R	R	R	R	R	R	159 E	80 E				NR	NR	NR
Silver									R	R	R	NR	NR	NR
Sodium			J	J	R	R	4.74 E					NR	NR	NR
Thallium	R	R	R	R			29.6	15	R	R	R	NR	NR	NR
Tin					10300	10600	8410	J	R	R	R	NR	NR	NR
Vanadium					R	R			R	R	R	NR	NR	NR
Zinc	J				R	R			R	R	R	NR	NR	NR
Cyanide	R	189	R	R	R	R	646	386				NR	NR	NR
							99000	62900	R	R	R	NR	NR	NR
							21	45.2				NR	NR	NR

NOTES:
Blank space - compound analyzed for but not detected
E - estimated value
J - estimated value, compound present below CRDL but above IDL
R - analysis did not pass EPA QA/QC
NR - analysis not required

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RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: Leon Lazarus

FROM: Amy Brochu

DATE: 9/30/87

TIME: 12:00 noon

SUBJECT: CLP Inorganics Data Packages for Quality Assurance Review

SUMMARY OF COMMUNICATION

Attached are the following CLP Inorganics Data Packages to be reviewed for Quality Assurance:

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
MKY Facility, REM2/Over.	7928	Century-NJ	Inorganics water soil	 9 19	MBL486,415	MBL478 & 479, 490 & 493, 491 & 494, 480 & 481, 483 & 484, 410 & 414
Maywood Chem., REM3/Over.	7946	Centec	Inorganics water soil	 1 2	MBL225	--
Lipari LF, REM2/Rem.	7894	Chemtech	Inorganics + CN^- water soil	 1 35	MBL459	MBJ917 & 927, MBL465 & 470
Swepco Tube, FIT/SI	7733	Hittman	Inorganics water soil	 4 2	MBL140, 141	--
Dayton T. Brown, FIT/SI	7732	Hittman	Inorganics + CN^- water soil	 5 4	MBJ606, MBK660, MBK663	--

CONCLUSIONS, ACTION TAKEN OR REQUIRED

Kentucky Ave. Wellfield, REM3/Over.	7896	Cambridge	Inorganics water	 4	MBL546	--
Brewster Wellfield, REM3/Rem.	3174B	Wilson	SAS-grain size, moisture, spec. grav. soil	 6		--

JAN 1 1 [illegible]

INFORMATION COPIES TO: File

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

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STANDARD OPERATING PROCEDURES

Title: APPENDIX A - CHECK LIST AND REPORT FORM.

Date:
Number:
Revision: 0

A.1 This section must be completed by the Surveillance and Monitoring Section.

A.1.1 Project Name/Site: Dayton T. Brown

A.1.2 Contract No. 68-01-7056 Case No. 7732

A.1.3 Objective of Study (Specify data used)

FIT - SI

II 7TFA02P022

A.1.4 Name of Analytical Laboratory 1: Hittman

A.1.4.1 Sample Matrix: Water 5 Soil/Sediment 4

Other (Describe)

A.1.4.2 Concentration Requested: Low ✓ Medium

A.1.4.3 Sample Nos.: W: MBK666, 667; MBJ606; MBK660, 663
S: MBK670; MBL 126-128.

A.1.5 Name of Analytical Laboratory 2:

A.1.5.1 Sample Matrix: Water Soil/Sediment

Other (Describe)

A.1.5.2 Concentration Requested: Low Medium

A.1.5.3 Sample Nos.:

A.1.6 Name of Laboratory 3:

A.1.6.1 Sample Matrix: Water Soil/Sediment

Other (Describe)

A.1.6.2 Concentration Requested: Low Medium

A.1.6.3 Sample Nos.:

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

Contractor Preparer _____ Completion Date 12-30-87

NOTE: All "action" requirements apply to data preparer, unless specifically stated otherwise.

		YES	NO	N/A
A.1.1	Contract Compliance Screening Report (CCS) - Present?	✓		
A.1.2	Record of Communication (from RSCC) - Present?	[✓]		
	Action: If no, request from RSCC.			
A.1.3	Sample Traffic Report - Present or on file?	[✓]		
	Action: If no, request from Regional Sample Control Center (RSCC).			
A.1.4	Cover Page - Present?	[✓]		
	ACTION: If no, prepare Telephone Record Log, and contact laboratory.			
	Do numbers of sample correspond to numbers on Record of Communication?	[✓]		
	Do sample numbers on cover page agree with sample numbers on:			
	a. Traffic Report Sheet?	[✓]		
	b. Form I's?	[✓]		
	c. Surveillance and Monitoring Branch Review	[✓]		
	ACTION: If no for any of the above, contact RSCC for clarification.			
A.1.5	Form I (Data Reporting) - All present and complete?	[✓]		
	ACTION: If no, prepare telephone record log and contact laboratory.			

STANDARD OPERATING PROCEDURE

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
A.1.6 Holding Times (Aqueous Samples Only) (Examine Sample Traffic Reports and Form X)			
Mercury (28 days) - Exceeded?		[✓]	
Cyanide (14 days) - Exceeded?		[✓]	
Other metals (6 months) - Exceeded?		[✓]	
Conventionals (Use 40 CFR 136 criteria) - Exceeded?		[ ]	✓

Which Parameters? _____

CONTRACTOR ACTION: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection (see traffic report) to the date of analysis (from raw data). Attach to checklist.

MMB ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL). Flag as estimated (J) those values above IDL.

	YES	NO	N/A
A.1.7 Raw Data			
Digestion Log* for flame AA/ICP present?	[✓]		
Digestion Log for furnace AA present?	[✓]		
Digestion Log for mercury present?	[✓]		
Digestion Log for cyanides present?	[✓]		

*Weights, dilutions, and volumes used to obtain the reported values.

		YES	NO	N/A	
Measurement readout record present?	ICP	[✓]			
	Flame AA	[ ]		✓	
	Furnace AA	[✓]			
	Mercury	[✓]			* Bench sheet
	Cyanides	[✓]			* Bench sheet
Conventionals: _____		[ ]		✓	

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
Record of 4 point calibration present? Flame AA	[ ]		✓
Furnace AA	[✓]		

NOTE: If less than 4, other standards must be run immediately after calibration, and be ± 5% of true value.

	YES	NO	N/A
Record of 4 point calibration present? Mercury	[✓]		
Cyanide	[✓]		
Percent solids calculations present for soil (sediments)?	[✓]		

ACTION: If no for any of above, prepare Telephone Record Log and contact laboratory.

	YES	NO	N/A
Was one prep blank analyzed for each 20 samples?	[✓]		

MMB ACTION: If no, flag as estimated (J) all data which prep blank was not analyzed.
NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).

	YES	NO	N/A
Do concentration of field blanks fall below two times IDL for all aqueous parameters? and Soil parameters?	[ ]	✓	

MMB ACTION: If no, reject (red-line) all data (aqueous) (except field blank) that has a concentration less than ten times the (three times for soil data) field blank value but not flagged with a "U" (less than).

* Three field blanks, highest values used for judgement.
* Al, Ba, Cu, Zn, Cr, Fe, Pb, Mg, K, Na F.M.

A.1.8.1 Form II (Initial and Continuing Calibration Verification

	YES	NO	N/A
Present and complete?	[✓]		

ACTION: If no, prepare Telephone Record Log and contact laboratory.

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		YES	NO	N/A
A.1.8.2	Circle all values on Data Summary Sheet that are outside of contract windows. Are all calibration standards (initial and continuing) within 75-125%?	[✓]		
	Are all calibration standards (initial and continuing) within 50-150%?	[✓]		
	MMB ACTION: Flag as estimated (J) all data analyzed between a calibration standard of 50-75% or 125-150% recovery and nearest adjacent calibration standards reject (red-line) as unacceptable data if recovery of calibration standard is below 50% or above 150% for nearest adjacent standards.			
A.1.9.1	Form III (Blanks) - Present and complete?	[✓]		
	MMB ACTION: If no, prepare Telephone Record Log and contact laboratory.			
A.1.9.2	Form III (Blanks) and Field Blanks			
	Circle all calibration blank values on Data Summary Sheet that are above IDL. Are all calibration blank values less than Contract Required Detection Limits (CRDL)?	[✓]		
	MMB ACTION: If no, flag as estimated (J) on Form I all data between calibration blank with value over CRDL and nearest adjacent calibration blank.			
	Was an initial calibration blank analyzed?	[✓]		
	Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (whichever is more frequent)?	[✓]		
	CONTRACTOR ACTION: List those analytes which are out of compliance with the above criteria.			
	MMB ACTION: If no, flag as estimated (J) all values not analyzed within 5 samples of calibration blank.			

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
Do concentrations of prep blanks fall below two times IDL for all parameters?	[ ]	✓	

MMB ACTION: If no, reject (red-line) all data that has a concentration less than ten times the prep blank value, but not flagged with a "U" (less than).

+ water - Ba, Fe, Mg, K, Na, Zn
Soil - Fe, Mg, K, Na

A.1.10.1 Form IV (ICP Interference Check Sample) - Present and complete? NOTE: Not required for furnace AA, flame AA, mercury and Ca, K, Na, and Mg. [✓]

ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.10.2 Form IV (ICP Interference Check Sample [ICS]) - Circle all values on Data Summary Sheet that are more than ± 20% of established mean value. Are all ICP Interference Check Sample results inside of control limits (± 20% of true value)? [✓]

If no, is concentration of Al, Ca, Fe, or Mg lower in sample than in ICS? [ ] ✓

MMB ACTION: If no, flag as estimated (J) those sample results for which ICS recovery is between ± 20% to 50% of mean value; and reject (red-line) those sample results for which ICS recovery is less than 50%. If ICS recovery is above 150%, reject positive results only (not flagged with a "U").

A.1.11.1 Form IX (ICP Serial Dilution) - Circle all values on Data Summary Sheet with a RPD greater than 10%. Are all ICP Serial Dilution results within control limit of 10% RPD? [ ] ✓

If no, are all associated data on Form I's flagged with an "E"? [✓]+ ✓+

+ Mg + Soil: Ba
water: Ba, Fe

MMB ACTION: If not flagged with an "E" flag as estimated (J) all associated samples results for which RPD is greater than 10% but less than 100%; reject (red-line) all associated sample results for which RPD is above 100%.

2Mb

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
NOTE: Either diluted or undiluted analysis may be used to report final value as long as either is above 10 times IDL.			
A.1.12.1 Form V (Spiked Sample Recovery) - Present and complete for each matrix type? NOTE: Not required for Ca, Mg, K, and Na (both matrix types), Al and Fe (soil only).	[✓]	___	___
ACTION: If no, prepare telephone record log and contact laboratory.			
A.1.12.2 Form V (Spiked Sample Recovery)			
Was field blank used for spiked samples?	✓*	[___]	___
If yes, was field blank described as such on Traffic Report?	[✓]	___	___
MMB ACTION: Flag all data as estimated (J) for which field blank was used as spiked sample.			
Was at least one spiked sample prepared and analyzed for: every 20 water samples?	[✓]	___	___
Every 20 soil/sediment samples?	[✓]	___	___
For both AA and ICP when both are used for same analyte?	[___]	___	✓
MMB ACTION: If no, flag as estimated (J) all data for which spiked sampled was not analyzed. NOTE: If only one spiked sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
Circle all values on Data Summary Sheet that are outside of control limits (75% to 125%).			
Are all recoveries within control limits?	[___]	✓	___
If no, is sample concentration greater than four times spike concentration?	[___]	✓	___

* for Fe (water)

Same [illegible] Rejected.

* Soil - Sb, Hg
Water - Sb, Pb, Hg, Ag, Tl, Se, CN

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A	
ACTION: If no, circle those analytes on Form V for which sample concentration was not greater than four times the spike concentration.				
Are any spike recoveries: a) greater than 150%?	✓ +	[ ]		+ Soil - Ag
b) less than 50%?	✓ +	[ ]		+ Soil - Sb, Water - Sb, Pb, Ag, Tl, Sn
MMB ACTION: If greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U" (less than value). Likewise, flag associated soil/sediment data as estimated (J) which are not flagged with a "U". If less than 50%, reject (red-line) all associated data for aqueous samples only. Flag associated soil/sediment data as estimated (J).				
A.1.13.1 Form VI (Lab) Duplicates - Present and complete for each matrix type?	[✓]			
ACTION: If no, prepare Telephone Record Log and contact laboratory.				
A.1.13.2 Form VI (Lab) Duplicates				
Was field blank used for ~~spiked~~ duplicate samples?	✓ +	[ ]		+ Fe (water) [illegible]
ACTION: If yes, flag all data as estimated (J) for which field blank was used as duplicate.				
Was at least one duplicate sample prepared and and analyzed for: every 20 water samples?	[✓]			
Every 20 soil/sediment samples?	[✓]			
MMB ACTION: If no, flag as estimated (J) all data for which duplicate sample was not analyzed. NOTE: If only one duplicate sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).				

	YES	NO	N/A
Circle all values on Data Summary Sheet that are outside of control limits (20% or CRDL).			
Are all values within control limits?	[✓]		
Aqueous			
Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?		[✓]	
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?		[✓]	
MMB ACTION: If yes, reject (red-line) all associated data.			
Soil/Sediment			
Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?		[✓]	
Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?		[✓]	
MMB ACTION: If yes, reject (red-line) all associated data.			
A.1.13.3 Is "NC" reported in RPD column for any sample duplicate pair where either value is less than CRDL?	[✓]		
MMB ACTION: If no, write in "NC" with red pencil on Form VI and initial. Note under Data Acceptability Narrative (contract non-compliance).			
A.1.14.1 **Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS]**			
IDLs present and complete?	[✓]		
LCSs present and complete: aqueous?	[✓]		
soil/sediment?	[✓]		

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
ACTION: If no, prepare Telephone Record Log and contact laboratory.			

A.1.14.2 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS]

Circle all IDL values greater than CRDL on data summary sheet.

IS IDL greater than CRDL for any parameter?	___	[✓]	___

MMB ACTION: If yes, reject (red-line) all values flagged with "U" (less than "values").

Circle all LCS values outside of control limits (80% to 120%) on data summary sheet.

Is any LCS value: between 50% and 80%?	✓	[___]	___
between 120% and 150%?	___	[✓]	___
less than 50%?	___	[✓]	___
greater than 150%?	✓	[___]	___

MMB ACTION: Between 50% to 80%, flag all associated data as estimated (J); between 120% to 150% flag all positive (not flagged with a "U") results as estimated (J); less than 50% reject (red-line) all data; greater than 150% reject all positive results.

* Different criteria was used to judge 50% LCS values. Pb - N. - ✓ all 'J'

A.1.15.1 Form VIII (Standard Additions Results) - Present?	[✓]	___	___

If no, is any Form I result coded with an "S" or a "+"?

ACTION: If yes, write request on Telephone Record Log.

A.1.15.2 Furnace Standard Addition Results - Form VIII

Is any post-digestion spike recovery less than 10% for any result? (See RAW DATA)	___	[✓]	___

CONTRACTOR ACTION: Prepare a list of all results with recoveries less than 10%.

	YES	NO	N/A
MMB ACTION: If yes, reject (red-line) affected data.			
Is coefficient of correlation less than 0.990 for any sample?	___	[✓]	___
MMB ACTION: If yes, reject (red-line) affected data.			
A.1.15.3 Form IX (ICP Serial Dilutions)			
Present and complete for each matrix type?	[✓]	___	___
ACTION: If no, write request on Telephone Record Log.			
A.1.16.1 Dissolved Inorganics			
Were any analyses performed for dissolved as well as total analytes?	___	[✓]	___
If yes, apply the following questions only if both dissolved and total constituents are above CRDL (For SAS parameters: above 5 * IDL).			
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%.	___	[___]	✓
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?	___	[___]	✓
MMB ACTION: If more than 10%, flag both dissolved and total values as estimated (J); if more than 50% reject (red-line) the data for both values.			
CONTRACTOR ACTION: Prepare a list comparing differences between all dissolved and total analytes. Compute the differences as a percent of the total analyte only when both dissolved and total concentrations are above CRDL (5 * IDC for SAS parameters).			

A.2.1 Data Verification

A.2.1.1 Choose at least one furnace AA parameter, one flame AA parameter, two ICP parameters, mercury and cyanide (if determined) for the initial evaluation process. If errors are encountered during review, perform the following:

a. Furnace AA - evaluate all other furnace parameters for the type of error found.

b. Flame AA/ICP _ evaluate another two parameters for same type error(s), if still encountered, then all other parameters must be examined for same type of error(s).

A.2.1.2 For each parameter chosen for the initial evaluation, all deliverables (except for Form I's - see below) must be examined for computation and transcription errors and omissions.

A.2.2 Ten percent of Form I's (at least one) should be evaluated initially for computation, transcription errors and/or omissions. If errors are found, check all other Form I's for same type error(s).

A.2.3 Data Assessment Checklist

List Parameter(s) chosen as Initial Evaluation Parameters for

Furnace As Pb
Flame _____
ICP Al Cu
List Samples (Form I's) chosen for initial review: Random

A.2.3.1 Form I (Data Reporting)

	YES	NO	N/A
Was a brief physical description of sample given in comments section? On digestion logs	[✓]	___	___
ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or list separately and attach to checklist.			
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___

	YES	NO	N/A
ACTION: If yes, prepare Telephone Record Log, and contact laboratory for corrected data.			
Are all "less than" values properly coded with a "U"?	[✓]		
ACTION: If no, write request for corrected data on Telephone Record Log, and red pencil affected data with "U" on Form I and initial.			
Were any samples diluted beyond requirements of contract?		[✓]	
If yes, were dilutions noted under Comments Section of Form I?	[ ]		[✓]
ACTION: Note under "Contract Problems/Non-Compliance" of data assessment narrative.			

A.2.3.2 Form II (Initial and Continuing Calibration Verification)

	YES	NO	N/A
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, request corrected data and prepare Telephone Record Log; correct errors with red pencil and initial.			
Does Raw Data Record agree with weights and volumes required by CLP methods?	[✓]		
ACTION: If no, prepare Telephone Record Log, and contact laboratory for explanation.			

A.2.3.3 Linear Range

	YES	NO	N/A
Was any sample result (raw data) higher than highest calibration standard (except ICP) or linear range (Form XIII) by more than 10%? (Note: Form XIII provided only quarterly.)		[✓]	
MMB ACTION: If yes, flag result reported on Form I as estimated (J).			

Title: Appendix A.2: Data Assessment - (Core Review)

	YES	NO	N/A
A.2.3.4 Form III (Blanks)			
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
A.2.3.5 Form IV (ICP Interference Check Sample [ICS])			
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
Was ICS analyzed at beginning and end of run (and at least once every 8 hours)?	[✓]	___	___
MMB ACTION: If no, flag as estimated (J) all samples for which AL, CA, Fe or MG is higher than in ICS.			
A.2.3.6 Form V (Spike Sample Recovery)			
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct errors with red pencil and initial.			
A.2.3.7.1 Form VI (Duplicates)			
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			

	YES	NO	N/A
A.2.3.7.2 Field Duplicates			
Were field duplicates analyzed?	___	[✓]	___
ACTION: If yes, prepare a list of duplicate results and corresponding RPD. Apply CLP results criteria, and circle all values outside of contract/limits.			
Aqueous			
Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?	___	[___]	✓
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?	___	[___]	✓
MMB ACTION: If yes, reject (red-line) associated data for field duplicates only.			
Soil/Sediment			
Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?	___	[___]	✓
Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?	___	[___]	✓
MMB ACTION: If yes, reject (red-line) all associated data for field duplicates only.			

		YES	NO	N/A
A.2.3.8	**Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample ([LCS])**			
	Do any computation/transcription errors exceed 10% of IDL and/or LCS values?	___	[✓]	___
	ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
	Was at least one LCS analyzed for every 20 aqueous samples?	[✓]	___	___
	CONTRACTOR ACTION: List exceptions and attach to checklist.			
	MMB ACTION: If no, flag as estimated (J) all aqueous data for which LCS was not analyzed. NOTE: If only one LCS was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
A.2.3.9	**Form IX (ICP Serial Dilution)**			
	Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
	ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
A.2.3.10	**Furnace AA Results**			
	Were duplicate injections analyzed for each sample?	[✓]	___	___

	YES	NO	N/A
MMB ACTION: If no, reject (red-line) all positive (not flagged with a "U") results.			
CONTRACTOR ACTION: List all exceptions and attach to checklist.			
For any concentrations above CRDL do duplicate injections agree to within ± 20% RSD?	[✓]		
If no, was analysis repeated at least once?	[ ]		✓
MMB ACTION: If no, flag result reported on Form I as estimated (J) when RSD is between 20 to 50%. If RSD is above 50%, reject (red-line).			
If yes, was second run within ± 20% RSD?	[ ]		✓
MMB ACTION: If no, do as above.			

A.2.3.11 Form VIII (Standard Addition Results)

	YES	NO	N/A
Are any MSA analyses missing from Form VII?		[✓]	
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data, and correct errors with red pencil and initial.			
Was "special quantitation procedure" followed correctly?	[✓]		
ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or prepare a separate list.			

Ref. 17
p. 25 of 168

Title: Appendix A.3: Data Acceptability Narrative

Case# 7732 Site Dayton T. Brown
Lab Hittman - Ebasco

A.3.1 Are all data of acceptable quality? Yes ___ No ✓

If no, list exceptions with reason(s) for rejection of qualification as estimated value (J).

① Ba; Ca; Cr; Fe; Pb; K; Zn; Samples MBK 666-667 (water)
Al Sample MBK 667 (water)
: Data rejected (red-lined) due to field blank contamination. Concentration of field blank does not fall below two times IDL and sample concentrations are less than ten times the field blank value and not flagged with 'u'
Pb; K; Na; Samples MBK 670; MBL 126-128 (soil)
Ca; Samples MBK 670; MBL 126-127 (soil)
Zn; Samples MBK 670 MBL 127-128 (soil)
Ba; Samples MBL 127-128
Cr; Sample MBL 127
Mg; Sample MBL 128
Data rejected (red-lined) due to field blank contamination as above. Sample concentrations however fall below three times the field blank value and not flagged with 'u'

MMB Reviewer: [signature] Date: 12-30-87
Signature

Verified by: [signature] Date: 1-4-88
Signature

5266b

Ref. 17
p. 26 of 168

CASE # 7732 PAGE # 2

Title: Appendix A.3: Data Acceptability Narrative

A.3.1 (Continuation)

(2) Ba; Fe; Zn; Samples MBJ 606, MBK 660-663 [666, 667 previously rejected]
Mg, K; Na; Samples MBJ 606; MBK 660-663 (waters)
K; Na; Samples MBK 670; MBL 126-128
Mg; Samples MBL 127 [128 previously rejected] (soils)
: Data rejected (red-lined) due to preparation blank contamination. Concentration of prep blank does not fall below two times IDL and the sample concentrations are less than ten times the prep blank value and not flagged with 'U'.

(3) Sb; Ag; Tl; Sn; Samples MBJ 606, MBK 660, 663, 666-667 (water)
Pb; Samples MBJ 606, MBK 660, 663 [666-667 previously rejected] (water)
: Data rejected (red-lined) spike recovery is less than 50%.

~~A.3.2 Contract Problems/Non-compliance~~

Sb; Samples MBK 670; MBL 126-128 (soil)
Hg; Samples MBL 126 (soil) [NOT FLAGGED WITH 'U']
Data flagged as estimated 'J' spike recoveries are less than 50% and greater than 150% respectively.

(4) Ba, All samples (water + soil: waters previously rejected; soils 127-128 rejected)
Fe: All water samples (all previously rejected)
: Data flagged as estimated 'J'; ICP serial dilution result is outside control limit of 10%

(5) Fe: All water samples: field blank used for matrix spike and duplicate analysis (data already rejected)
No further action taken.

Title: Appendix A.3: Data Acceptability Narrative

Case# 7732 Site PAGE #3
Lab

A.3.1 Are all data of acceptable quality? Yes ___ No ✓

If no, list exceptions with reason(s) for rejection of qualification as estimated value (J).

⑥ Ni; (Pb + K previously rejected) All Soil Samples
Data judged to be estimated 'J' due to
Soil LCS value exceeding 150%, and the
found concentration of 40 mg/kg to fall
outside the TKM control limits, 5 to 39.8 mg/kg.
For the LCS values for soil the TKM control limits
were used to evaluate the data.

MMB Reviewer: _____ Date: _____
Signature

Verified by: [signature] Date: 1-4-88
Signature

5266b

Ref. 17
P. 28 of 168

HITTMAN EBASCO ASSOCIATES INC.
A Subsidiary of EBASCO SERVICES INCORPORATED

9151 Rumsey Road, Columbia, MD 21045
(301) 730-8525

HITTMAN EBASCO

December 28, 1987

RECEIVED
DEC 29 1987
MONITORING MANAGEMENT

Mr. Frank Messina
EPA Region II
Woodbridge Avenue
Building 209
Edison, New Jersey 08837

Dear Mr. Messina:

Enclosed is the Form VII for soils you requested for case 7732. Please excuse the delay in submission.

Please feel free to call if I may be of further assistance.

Sincerely,

Elizabeth A. Pickral

Elizabeth A. Pickral
Reporting Section Supervisor

EPA-7003
Enclosures
eap

Ref 17
p. 29 of 168

LABORATORY: HITTMAN EBASCO
CASE: 7732
CONTRACT NO: 7002-029

CASE NARRATIVE

1) IRON PREP BLANKS ARE ABOVE THE CRDL. ALL SOIL SAMPLES ASSOCIATED WITH THE PREP BLANK ARE TEN TIMES THE VALUE OF THE BLANK. THE ASSOCIATED WATER SAMPLES ARE NOT TEN TIMES THE BLANK VALUE. THE LAB FOUND A PROBLEM WITH CONTAMINATED GLASSWARE. THERE WAS NOT SUFFICIENT SAMPLE LEFT TO DO ANOTHER DIGESTION. ALL OTHER QC ASSOCIATED WITH THESE SAMPLES IS IN CONTROL.

2) CYANIDE

ANALYST DISTILLED 380 ML OF SAMPLE FOR MBK667 DUE TO LIMITED SAMPLE VOLUME. THIS RAISES THE DETECTION LIMIT BY A FACTOR OF 1.3.

DURING THE ANALYSIS OF THE ICV, HALF OF THE SOLUTION WAS LOST RESULTING IN A DILUTION FACTOR OF 2.2. -THE RESULTING ICV RECOVERY WAS IN CONTROL.

3) ALL DATA VOIDED WITH A BLACK MARKER IS DATA THAT DOES NOT PERTAIN TO CASE 7732. IT WAS VOIDED ON 9/23/87 BY MAW.

4) AS RUN ON THE 3030 IDL = 1.42
TL RUN ON THE 3030 IDL = 3.9
AG RUN ON THE 3030 IDL = 0.66
CR RUN ON THE 3030 IDL = 0.62

REVIEWED BY: Phyllis Christopher

PHYLLIS CHRISTOPHER
INORGANIC SECTION
SUPERVISOR

REVIEWED BY: L. D. Carter

LARRY CARTER
LABORATORY GENERAL
MANAGER

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

Ref. 17
P. 30 of 168

Date 9/24/87

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name HITTMAN EBASCO ASSOCIATES INC. Case No. 7732

SOW No. 7/84 Q.C. Report No. 33

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MBJ 606	4890		
MBK 660	4891		
MBK 663	4892		
MBK 666	4893		
MBK 667	4894		
MBK 670	4895		
MBL 126	4896		
MBL 127	4897		
MBL 128	4898		

Comments:

ICP Interelement and background corrections applied? Yes X No ___.

If yes, corrections applied before X or after ___ generation of raw data.

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

Ref. 17
p. 31 of 168

Form I

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. MBL 126

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4896 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

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

1.	Aluminum	4190 P	13.	Magnesium	[577] P E
2.	Antimony	4.8 UFR J	14.	Manganese	150 P
3.	Arsenic	[1.3] F	15.	Mercury	0.1 CVR J
4.	Barium	[24] P J	16.	Nickel	[16] P J
5.	Beryllium	1.0 UP	17.	Potassium	~~[142] P~~
6.	Cadmium	2.0 UP	18.	Selenium	0.5 UF
7.	Calcium	~~[513] P~~	19.	Silver	0.4 UF
8.	Chromium	7.4 F	20.	Sodium	~~[40] P~~
9.	Cobalt	[5.5] P	21.	Thallium	2.0 UF
10.	Copper	[11] P	22.	Tin	18 UP
11.	Iron	6360 P	23.	Vanadium	8.0 UP
12.	Lead	~~15 F~~	24.	Zinc	189 P
Cyanide		1.0 U	Percent Solids (%)		95.5

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: Mg - E flag due to serial dilution out of control

Lab Manager [signature]

Ref. 17
p. 32 of 168

Form I

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. MBL 127

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4897 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

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

1.	Aluminum	1020 P	13.	Magnesium	~~[237] P E~~
2.	Antimony	4.7 UF R	14.	Manganese	40 P
3.	Arsenic	0.7 UF	15.	Mercury	0.1 UCVR
4.	Barium	~~[8.8] P~~	16.	Nickel	[9.3] P
5.	Beryllium	1.0 UP	17.	Potassium	~~[893] P~~
6.	Cadmium	2.0 UP	18.	Selenium	0.4 UF
7.	Calcium	~~[26] P~~	19.	Silver	[0.4] F
8.	Chromium	~~[13] F~~	20.	Sodium	~~[29] P~~
9.	Cobalt	4.2 UP	21.	Thallium	1.9 UF
10.	Copper	[6.8] P	22.	Tin	18 UP
11.	Iron	1530 P	23.	Vanadium	7.8 UP
12.	Lead	~~3.6 F~~	24.	Zinc	~~[8.8] P~~

Cyanide 1.0 U

Percent Solids (%) 97.5

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: Mg - E flag due to serial dilution out of control

Lab Manager [signature]

Ref. 17
p. 33 of 168

Form I

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. MBL 128

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4898 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

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

1.	Aluminum	1370 P	13.	Magnesium	~~[181]PF~~
2.	Antimony	5.5UFR J	14.	Manganese	52 P
3.	Arsenic	[1.5]F	15.	Mercury	0.1UCVR
4.	Barium	~~[97]P~~ J	16.	Nickel	[8.5]P J
5.	Beryllium	1.1 UP	17.	Potassium	~~[102]P~~
6.	Cadmium	2.3 UP	18.	Selenium	0.5UF
7.	Calcium	26 UP	19.	Silver	[1.3]F
8.	Chromium	[3.4]F	20.	Sodium	~~[29]P~~
9.	Cobalt	4.8UP	21.	Thallium	2.3 UF
10.	Copper	103 P	22.	Tin	21 UP
11.	Iron	2210 P	23.	Vanadium	9.1 UP
12.	Lead	~~5.7F~~	24.	Zinc	~~[34]P~~

Cyanide 1.2U Percent Solids (%) 83.6

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: Mg - E flag due to serial dilution out of control

Lab Manager [signature]

Ref. 17
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Form I

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. MBJ 606

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4890 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	[97]P	13.	Magnesium	~~[86]P~~
2.	Antimony	~~[9.6]FR~~	14.	Manganese	2.5 UP
3.	Arsenic	1.4 UF	15.	Mercury	0.2 UCVR
4.	Barium	~~[11]P~~	16.	Nickel	13 UP
5.	Beryllium	2.0 UP	17.	Potassium	~~[106]P~~
6.	Cadmium	4.1 UP	18.	Selenium	0.9 UF
7.	Calcium	[65]P	19.	Silver	~~0.7 UFR~~
8.	Chromium	[1.3]F	20.	Sodium	~~[397]P~~
9.	Cobalt	8.5 UP	21.	Thallium	~~3.9 UFR~~
10.	Copper	[16]P	22.	Tin	~~37 UPR~~
11.	Iron	~~136 P~~ J	23.	Vanadium	16 UP
12.	Lead	~~[45]FR~~	24.	Zinc	~~[16]P~~

Cyanide 10 UR Percent Solids (%)

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:

Lab Manager [signature]

Ref. 17
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Form I

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 660

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4891 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	83 UP	13.	Magnesium	~~[129]P~~
2.	Antimony	~~9.6 UFR~~	14.	Manganese	2.5 UP
3.	Arsenic	1.4 UF	15.	Mercury	0.2 UCVR
4.	Barium	~~[9.0]P~~	16.	Nickel	13 UP
5.	Beryllium	2.0 UP	17.	Potassium	~~[87]P~~
6.	Cadmium	4.1 UP	18.	Selenium	0.9 UF
7.	Calcium	[125]P	19.	Silver	~~[1.3]FR~~
8.	Chromium	[1.5]F	20.	Sodium	~~[397]P~~
9.	Cobalt	8.5 UP	21.	Thallium	~~3.9 UCFR~~
10.	Copper	9.1 UP	22.	Tin	~~37 UPR~~
11.	Iron	~~138P~~	23.	Vanadium	16 UP
12.	Lead	~~14 FR~~	24.	Zinc	~~[16]P~~

Cyanide 10 UR Percent Solids (%)

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:

Lab Manager [signature]

Ref. 1+
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Form I

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 663

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4892 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	[128]P	13.	Magnesium	~~[165]P~~
2.	Antimony	~~9.6UFR~~	14.	Manganese	2.5UP
3.	Arsenic	1.4UF	15.	Mercury	0.2UCVR
4.	Barium	~~[15]P~~	16.	Nickel	13UP
5.	Beryllium	2.0UP	17.	Potassium	~~[306]P~~
6.	Cadmium	4.1UP	18.	Selenium	0.9UF
7.	Calcium	[1920]P	19.	Silver	~~[1.3]FR~~
8.	Chromium	[1.4]F	20.	Sodium	~~[936]P~~
9.	Cobalt	8.5UP	21.	Thallium	~~3.9UPR~~
10.	Copper	[12]P	22.	Tin	~~37UPR~~
11.	Iron	~~113P~~	23.	Vanadium	16UP
12.	Lead	~~21FR~~	24.	Zinc	~~66P~~

Cyanide 10UR Percent Solids (%)

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:

Lab Manager [signature]

Form I

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. M8K 666

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4893 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	88 UP	13.	Magnesium	[2470] P
2.	Antimony	~~9.6 UFR~~	14.	Manganese	[13] P
3.	Arsenic	1.4 U ~~F~~	15.	Mercury	0.2 UCVR
4.	Barium	~~[55] P~~	16.	Nickel	[14] P
5.	Beryllium	2.0 UP	17.	Potassium	~~[2140] P~~
6.	Cadmium	4.1 UP	18.	Selenium	0.9 UF
7.	Calcium	~~6610 P~~	19.	Silver	~~[0.9] FR~~
8.	Chromium	~~[1.2] F~~	20.	Sodium	10300 P
9.	Cobalt	8.5 UP	21.	Thallium	~~20 UFR~~
10.	Copper	57 P	22.	Tin	~~37 UFR~~
11.	Iron	~~213 P~~	23.	Vanadium	16 UP
12.	Lead	~~5.6 FR~~	24.	Zinc	~~79 P~~

Cyanide 10 UR Percent Solids (%)

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: Tl: dilution factor 5x

Lab Manager [signature]

Ref. 17
p. 38 of 168

Form I

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 667

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4894 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ✓ Soil ____ Sludge ____ Other ____

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

1.	Aluminum	~~[65]P~~	13.	Magnesium	[2560]P
2.	Antimony	~~9.6UFR~~	14.	Manganese	612 P
3.	Arsenic	1.4 UF	15.	Mercury	0.2 UCVR
4.	Barium	~~[37]P~~ T	16.	Nickel	[16]P
5.	Beryllium	2.0 UP	17.	Potassium	~~[2440]P~~
6.	Cadmium	4.1 UP	18.	Selenium	0.9UF
7.	Calcium	~~7600P~~	19.	Silver	~~0.74UFR~~
8.	Chromium	~~[16]F~~	20.	Sodium	10600 P
9.	Cobalt	8.5 UP	21.	Thallium	~~20.2 UCFR~~
10.	Copper	111 P	22.	Tin	~~37 UPR~~
11.	Iron	~~483P~~ T	23.	Vanadium	16 UP
12.	Lead	~~[34]FR~~	24.	Zinc	~~21P~~

Cyanide 10 UR Percent Solids (%)

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: Tl: Dilution factor 5x

Lab Manager [signature]

Ref. 17
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Form I

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 670

Date 9/24/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc. CASE NO. 7732

SOW NO. 7/84

LAB SAMPLE ID. NO. 4895 QC REPORT NO. 33

Elements Identified and Measured

Concentration: Low ✓ Medium ____

Matrix: Water ____ Soil ✓ Sludge ____ Other ____

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

1.	Aluminum	4390 P	13.	Magnesium	[417] PE
2.	Antimony	4.7 UFR J	14.	Manganese	181 P
3.	Arsenic	[2.6] F	15.	Mercury	0.1 UCVR
4.	Barium	[40] P J	16.	Nickel	[15] P J
5.	Beryllium	1.0 UP	17.	Potassium	~~[157] P~~
6.	Cadmium	2.0 UP	18.	Selenium	0.4 UF
7.	Calcium	~~[377] P~~	19.	Silver	0.3 UF
8.	Chromium	10 F	20.	Sodium	~~[37] P~~
9.	Cobalt	[6.8] P	21.	Thallium	1.9 UF
10.	Copper	[9.2] P	22.	Tin	18 UP
11.	Iron	7220 P	23.	Vanadium	[11] P
12.	Lead	~~93 F~~	24.	Zinc	~~64 P~~
	Cyanide	1.0 U		Percent Solids (%)	98.0

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: Mg - E flag due to serial dilution out of control

Lab Manager [signature]

Ref. 17
40 of 168

RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: Leon Lazarus

FROM: Regina Mulcahy

DATE: 9/03/87

TIME: 4:30 P.M.

SUBJECT: CLP Inorganics Data Packages for Quality Assurance Review

SUMMARY OF COMMUNICATION

Attached are the following CLP Inorganics Data Packages to be reviewed for Quality Assurance:

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
Shamong Townshp LF/FIT/SI	7734	Chemtech	Inorganics soil water	8 1	MBL161(rins)	None
Cinnaminson REM2/Rem	7662	Wilson	Inorganics water	9	MBH773(TB) MBH779(FB)	MBH771, MBI8[illegible]
Dayton B. Brown/FIT/SI	7765/ 3181B	Chemtech	Inorganics sludge	2	None	None
Port Wash. LF/REM2/Enf	7817	Compuchem	Inorganics soil water	6 2	MBI827,825 (FB)	None
Walmore Rd. FIT/SI	7786	Compuchem	Inorganics soil water	7 4	MBL508,509 (rins)	None
SCP Chem. REM3/Enf overs	7665	Wilson	Inorganics soil water	3 7	MBJ563(FB)	None
Princeton Polychrome/FIT/SI	7668	Chemtech	Inorganics soil water	3 5	MBL119,118 (rins)	None
Keck Farm / FIT/SI	~~7669~~ 7669	Chemtech	Inorganics soil water	4 6	MBK759-761 (rins)	None
Bog Creek REM3/Rem	7461	RMAL	Inorganics water	16	MBJ335,343 (FB)	None
Schenk's Scrapyard/FIT/SI	7666	PBS&J	Inorganics soil water	5 2	MBK 685,686 (rins)	None

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES TO: File

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-9 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

A.1 This section must be completed by the Surveillance and Monitoring Section.

A.1.1 Project Name/Site: _____

A.1.2 Contract No. _____ Case No. _____

A.1.3 Objective of Study (Specify data used) _____

A.1.4 Name of Analytical Laboratory 1: _____

A.1.4.1 Sample Matrix: Water _____ Soil/Sediment _____

Other (Describe) _____

A.1.4.2 Concentration Requested: Low _____ Medium _____

A.1.4.3 Sample Nos.: _____

A.1.5 Name of Analytical Laboratory 2: _____

A.1.5.1 Sample Matrix: Water _____ Soil/Sediment _____

Other (Describe) _____

A.1.5.2 Concentration Requested: Low _____ Medium _____

A.1.5.3 Sample Nos.: _____

A.1.6 Name of Laboratory 3: _____

A.1.6.1 Sample Matrix: Water _____ Soil/Sediment _____

Other (Describe) _____

A.1.6.2 Concentration Requested: Low _____ Medium _____

A.1.6.3 Sample Nos.: _____

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STANDARD OPERATING PROCEDURE

Date: Sep-3 1988
Number: AA-2
Revision: 5

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

~~Contractor~~ MHB Preparer FRANK MESSINA Completion Date 2-09-88

NOTE: All "action" requirements apply to data preparer, unless specifically stated otherwise.

		YES	NO	N/A
A.1.1	Contract Compliance Screening Report (CCS) - Present?	✓		
A.1.2	Record of Communication (from RSCC) - Present?	[ ]		
	Action: If no, request from RSCC.			
A.1.3	Sample Traffic Report - Present or on file?	[✓]		
	Action: If no, request from Regional Sample Control Center (RSCC).			
A.1.4	Cover Page - Present?	[✓]		
	ACTION: If no, prepare Telephone Record Log, and contact laboratory.			
	Do numbers of sample correspond to numbers on Record of Communication?	[✓]		
	Do sample numbers on cover page agree with sample numbers on:			
	a. Traffic Report Sheet?	[✓]		
	b. Form I's?	[✓]		
	c. Surveillance and Monitoring Branch Review	[✓]		
	ACTION: If no for any of the above, contact RSCC for clarification.			
A.1.5	Form I (Data Reporting) - All present and complete?	[✓]		
	ACTION: If no, prepare telephone record log and contact laboratory.			

Ref. 17
p.43-166

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
A.1.6 Holding Times (Aqueous Samples Only) (Examine Sample Traffic Reports and Form I)			
Mercury (28 days) - Exceeded?	[ ]	[ ]	[✓]
Cyanide (14 days) - Exceeded?	[ ]	[ ]	[✓]
Other metals (6 months) - Exceeded?	[ ]	[ ]	[✓]
Conventionals (Use 40 CFR 136 criteria) - Exceeded?	[ ]	[ ]	[✓]

Which Parameters? _____

CONTRACTOR ACTION: Prepare a list of all samples and analytes for which holding times have been exceeded. Specify the number of days from date of collection (see traffic report) to the date of analysis (from raw data). Attach to checklist.

RMB ACTION: If yes, reject (red-line) values less than Instrument Detection Limit (IDL). Flag as estimated (J) those values above IDL.

A.1.7 Raw Data			
Digestion Log* for flame AA/ICP present?	[✓]	[ ]	[ ]
Digestion Log for furnace AA present?	[✓]	[ ]	[ ]
Digestion Log for mercury present?	[✓]	[ ]	[ ]
Digestion Log for cyanides present?	[ ]	[✓]	[ ]

*Weights, dilutions, and volumes used to obtain the reported values.

Measurement readout record present?	ICP	[✓]	[ ]	[ ]
	Flame AA	[✓]	[ ]	[ ]
	Furnace AA	[✓]	[ ]	[ ]
	Mercury	[✓]	[ ]	[ ]
	Cyanides	[✓]	[ ]	[ ]
Conventionals: _____		[ ]	[ ]	[✓]

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
Record of 4 point calibration present? Flame AA	[✓]		
Furnace AA	[✓]		
NOTE: If less than 4, other standards must be run immediately after calibration, and be ± 5% of true value.			
Record of 4 point calibration present? Mercury	[✓]		
Cyanide	[✓]		
Percent solids calculations present for soil (sediments)?	[✓]		
ACTION: If no for any of above, prepare Telephone Record Log and contact laboratory.			
Was one prep blank analyzed for each 20 samples?	[✓]		
MMB ACTION: If no, flag as estimated (J) all data which prep blank was not analyzed. NOTE: If only one blank was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
Do concentration of field blanks fall below two times IDL for all aqueous parameters? and Soil Parameters?	[ ]		✓
MMB ACTION: If no, reject (red-line) all data (aqueous) (except field blank) that has a concentration less than ten times the (three times for solids) field blank value but not flagged with a "U" (less than).			
A.1.8.1 Form II (Initial and Continuing Calibration Verification Present and complete?	[✓]		
ACTION: If no, prepare Telephone Record Log and contact laboratory.			

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p. 45 of 168

Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

		YES	NO	N/A
A.1.8.2	Circle all values on Data Summary Sheet that are outside of contract windows. Are all calibration standards (initial and continuing) within 75-125%?	[✓]		
	Are all calibration standards (initial and continuing) within 50-150%?	[✓]		
	MMB ACTION: Flag as estimated (J) all data analyzed between a calibration standard of 50-75% or 125-150% recovery and nearest adjacent calibration standards reject (red-line) as unacceptable data if recovery of calibration standard is below 50% or above 150% for nearest adjacent standards.			
A.1.9.1	Form III (Blanks) - Present and complete?	[✓]		
	MMB ACTION: If no, prepare Telephone Record Log and contact laboratory.			
A.1.9.2	Form III (Blanks) and Field Blanks			
	Circle all calibration blank values on Data Summary Sheet that are above IDL. Are all calibration blank values less than Contract Required Detection Limits (CRDL)?	[✓]		
	MMB ACTION: If no, flag as estimated (J) on Form I all data between calibration blank with value over CRDL and nearest adjacent calibration blank.			
	Was an initial calibration blank analyzed?	[✓]		
	Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (whichever is more frequent)?	[✓]		
	CONTRACTOR ACTION: List those analytes which are out of compliance with the above criteria.			
	MMB ACTION: If no, flag as estimated (J) all values not analyzed within 5 samples of calibration blank.			

	YES	NO	N/A
Do concentrations of prep blanks fall below two times IDL for all parameters?	[✓]		

MMB ACTION: If no, reject (red-line) all data that has a concentration less than ten times the prep blank value, but not flagged with a "U" (less than).

A.1.10.1 Form IV (ICP Interference Check Sample) - Present and complete? NOTE: Not required for furnace AA, flame AA, mercury and Ca, K, Na, and Mg. [✓]

ACTION: If no, prepare Telephone Record Log and contact laboratory.

A.1.10.2 Form IV (ICP Interference Check Sample [ICS]) - Circle all values on Data Summary Sheet that are more than ± 20% of established mean value. Are all ICP Interference Check Sample results inside of control limits (± 20% of true value)? [✓]

If no, is concentration of Al, Ca, Fe, or Mg lower in sample than in ICS? [ ] N/A ✓

MMB ACTION: If no, flag as estimated (J) those sample results for which ICS recovery is between ± 20% to 50% of mean value; and reject (red-line) those sample results for which ICS recovery is less than 50%. If ICS recovery is above 150%, reject positive results only (not flagged with a "U").

A.1.11.1 Form IX (ICP Serial Dilution) - Circle all values on Data Summary Sheet with a RPD greater than 10%. Are all ICP Serial Dilution results within control limit of 10% RPD? [ ] NO ✓

If no, are all associated data on Form I's flagged with an "E"? [ ] NO ✓

MMB ACTION: If not flagged with an "E" flag as estimated (J) all associated samples results for which RPD is greater than 10% but less than 100%; reject (red-line) all associated sample results for which RPD is above 100%.

Cd, Pb, N.

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
NOTE: Either diluted or undiluted analysis may be used to report final value as long as either is above 10 times IDL.			
A.1.12.1 Form V (Spiked Sample Recovery) - Present and complete for each matrix type? NOTE: Not required for Ca, Mg, K, and Na (both matrix types), Al and Fe (soil only).	[✓]		
ACTION: If no, prepare telephone record log and contact laboratory.			
A.1.12.2 Form V (Spiked Sample Recovery)			
Was field blank used for spiked samples?		[ ]	✓
If yes, was field blank described as such on Traffic Report?	[ ]		✓
MMB ACTION: Flag all data as estimated (J) for which field blank was used as spiked sample.			
Was at least one spiked sample prepared and analyzed for: every 20 water samples?	[ ]		✓
Every 20 soil/sediment samples?	[✓]		
For both AA and ICP when both are used for same analyte?	[ ]		✓
MMB ACTION: If no, flag as estimated (J) all data for which spiked sampled was not analyzed. NOTE: If only one spiked sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
Circle all values on Data Summary Sheet that are outside of control limits (75% to 125%).			
Are all recoveries within control limits?	[ ]*	✓	
If no, is sample concentration greater than four times spike concentration?	[ ]	✓*	

* Sb, As, Se, Tl, Pb

	YES	NO	N/A
ACTION: If no, circle those analytes on Form V for which sample concentration was not greater than four times the spike concentration.			
Are any spike recoveries: a) greater than 150%?	___	[✓]	___
b) less than 50%?	✓	[___]	___
MMB ACTION: If greater than 150%, reject (red-line) all associated aqueous data not flagged with a "U" (less than value). Likewise, flag associated soil/sediment data as estimated (J) which are not flagged with a "U". If less than 50%, reject (red-line) all associated data for aqueous samples only. Flag associated soil/sediment data as estimated (J).			
A.1.13.1 Form VI (Lab) Duplicates - Present and complete for each matrix type?	[✓]	___	___
ACTION: If no, prepare Telephone Record Log and contact laboratory.			
A.1.13.2 Form VI (Lab) Duplicates			
Was field blank used for ~~spiked~~ duplicate samples?	___	[___]	✓
ACTION: If yes, flag all data as estimated (J) for which field blank was used as duplicate.			
Was at least one duplicate sample prepared and and analyzed for: every 20 water samples?	[___]	___	✓
Every 20 soil/sediment samples?	[✓]	___	___
MMB ACTION: If no, flag as estimated (J) all data for which duplicate sample was not analyzed. NOTE: If only one duplicate sample was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			

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Title: Appendix A.1: Data Assessment - Contract Compliance (Significant Element Review)

	YES	NO	N/A
Circle all values on Data Summary Sheet that are outside of control limits (20% or CRDL).			
Are all values within control limits?	[✓]		
Aqueous			
Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?		[ ]	✓
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?		[ ]	✓
MMB ACTION: If yes, reject (red-line) all associated data.			
Soil/Sediment			
Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?		[✓]	
Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?		[✓]	
MMB ACTION: If yes, reject (red-line) all associated data.			
A.1.13.3 Is "NC" reported in RPD column for any sample duplicate pair where either value is less than CRDL?	[✓]		
MMB ACTION: If no, write in "NC" with red pencil on Form VI and initial. Note under Data Acceptability Narrative (contract non-compliance).			
A.1.14.1 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS]			
IDLs present and complete?	[✓]		
LCSs present and complete: aqueous?	[ ]		✓
soil/sediment?	[✓]		

	YES	NO	N/A
ACTION: If no, prepare Telephone Record Log and contact laboratory.			
A.1.14.2 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample [LCS])			
Circle all IDL values greater than CRDL on data summary sheet.			
IS IDL greater than CRDL for any parameter?	✓	[ ]	
MMB ACTION: If yes, reject (red-line) all values flagged with "U" (less than "values").			
Circle all LCS values outside of control limits (80% to 120%) on data summary sheet.			
Is any LCS value: between 50% and 80%?		[✓]	
between 120% and 150%?		[✓]	
less than 50%?		[✓]	
greater than 150%?		[✓]	
MMB ACTION: Between 50% to 80%, flag all associated data as estimated (J); between 120% to 150% flag all positive (not flagged with a "U") results as estimated (J); less than 50% reject (red-line) all data; greater than 150% reject all positive results.			
A.1.15.1 Form VIII (Standard Additions Results) - Present?	[✓]		
If no, is any Form I result coded with an "S" or a "+"?			
ACTION: If yes, write request on Telephone Record Log.			
A.1.15.2 Furnace Standard Addition Results - Form VIII			
Is any post-digestion spike recovery less than 10% for any result? (See RAW DATA)		[✓]	
CONTRACTOR ACTION: Prepare a list of all results with recoveries less than 10%.			

	YES	NO	N/A
MMB ACTION: If yes, reject (red-line) affected data.			
Is coefficient of correlation less than 0.990 for any sample?	___	[✓]	___
MMB ACTION: If yes, reject (red-line) affected data.			
A.1.15.3 Form IX (ICP Serial Dilutions)			
Present and complete for each matrix type?	[✓]	___	___
ACTION: If no, write request on Telephone Record Log.			
A.1.16.1 Dissolved Inorganics			
Were any analyses performed for dissolved as well as total analytes?	___	[✓]	___
If yes, apply the following questions only if both dissolved and total constituents are above CRDL (For SAS parameters: above 5 * IDL).			
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%.	___	[___]	✓
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?	___	[___]	✓
MMB ACTION: If more than 10%, flag both dissolved and total values as estimated (J); if more than 50% reject (red-line) the data for both values.			
CONTRACTOR ACTION: Prepare a list comparing differences between all dissolved and total analytes. Compute the differences as a percent of the total analyte only when both dissolved and total concentrations are above CRDL (5 * IDC for SAS parameters).			

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Title: Appendix A.2: Data Assessment - (Core Review)

A.2.1 Data Verification

A.2.1.1 Choose at least one furnace AA parameter, one flame AA parameter, two ICP parameters, mercury and cyanide (if determined) for the initial evaluation process. If errors are encountered during review, perform the following:

a. Furnace AA - evaluate all other furnace parameters for the type of error found.

b. Flame AA/ICP - evaluate another two parameters for same type error(s), if still encountered, then all other parameters must be examined for same type of error(s).

A.2.1.2 For each parameter chosen for the initial evaluation, all deliverables (except for Form I's - see below) must be examined for computation and transcription errors and omissions.

A.2.2 Ten percent of Form I's (at least one) should be evaluated initially for computation, transcription errors and/or omissions. If errors are found, check all other Form I's for same type error(s).

A.2.3 Data Assessment Checklist

List Parameter(s) chosen as Initial Evaluation Parameters for

Furnace As Tl
Flame K
ICP Al, Zn
List Samples (Form I's) chosen for initial review: ~~MBK~~ MBL 132, 168
FM 2-9-88

A.2.3.1 Form I (Data Reporting)

	YES	NO	N/A
Was a brief physical description of sample given in comments section?	[✓]		
ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or list separately and attach to checklist.			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	

Ref. 17
p. 53-A68

	YES	NO	N/A
ACTION: If yes, prepare Telephone Record Log, and contact laboratory for corrected data.			
Are all "less than" values properly coded with a "U"?	[✓]	___	___
ACTION: If no, write request for corrected data on Telephone Record Log, and red pencil affected data with "U" on Form I and initial.			
Were any samples diluted beyond requirements of contract?	✓	[___]	___
If yes, were dilutions noted under Comments Section of Form I?	[✓]	___	[___]
ACTION: Note under "Contract Problems/Non-Compliance" of data assessment narrative.			

A.2.3.2 Form II (Initial and Continuing Calibration Verification)

Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, request corrected data and prepare Telephone Record Log; correct errors with red pencil and initial.			
Does Raw Data Record agree with weights and volumes required by CLP methods?	[✓]	___	___
ACTION: If no, prepare Telephone Record Log, and contact laboratory for explanation.			

A.2.3.3 Linear Range

Was any sample result (raw data) higher than highest calibration standard (except ICP) or linear range (Form XIII) by more than 10%? (Note: Form XIII provided only quarterly.)	___	[✓]	___
MMB ACTION: If yes, flag result reported on Form I as estimated (J).			

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	YES	NO	N/A
A.2.3.4 Form III (Blanks)			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
A.2.3.5 Form IV (ICP Interference Check Sample [ICS])			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
Was ICS analyzed at beginning and end of run (and at least once every 8 hours)?	[✓]		
MMB ACTION: If no, flag as estimated (J) all samples for which AL, CA, Fe or MG is higher than in ICS.			
A.2.3.6 Form V (Spike Sample Recovery)			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct errors with red pencil and initial.			
A.2.3.7.1 Form VI (Duplicates)			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			

	YES	NO	N/A
A.2.3.7.2 Field Duplicates			
Were field duplicates analyzed?	___	[✓]	___
ACTION: If yes, prepare a list of duplicate results and corresponding RPD. Apply CLP results criteria, and circle all values outside of contract/limits.			
Aqueous			
Is any RPD greater than 50% where sample and duplicate are both greater than 5 times CRDL?	___	[___]	✓
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL, but greater than CRDL?	___	[___]	✓
MMB ACTION: If yes, reject (red-line) associated data for field duplicates only.			
Soil/Sediment			
Is any RPD greater than 100% where sample and duplicate are both greater than 5 times CRDL?	___	[___]	✓
Is any difference between sample and duplicate greater than 2 times CRDL where sample and/or duplicate is less than 5 times CRDL but greater than CRDL?	___	[___]	✓
MMB ACTION: If yes, reject (red-line) all associated data for field duplicates only.			

	YES	NO	N/A
A.2.3.8 Form VII (Instrument Detection Limits [IDL] and Laboratory Control Sample ([LCS])			
Do any computation/transcription errors exceed 10% of IDL and/or LCS values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
Was at least one LCS analyzed for every 20 aqueous samples?	[✓]		
CONTRACTOR ACTION: List exceptions and attach to checklist.			
MMB ACTION: If no, flag as estimated (J) all aqueous data for which LCS was not analyzed. NOTE: If only one LCS was analyzed for more than 20 samples, then first 20 samples analyzed do not have to be flagged as estimated (J).			
A.2.3.9 Form IX (ICP Serial Dilution)			
Do any computation/transcription errors exceed 10% of reported values?		[✓]	
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data and correct error with red pencil and initial.			
A.2.3.10 Furnace AA Results			
Were duplicate injections analyzed for each sample?	[✓]		

	YES	NO	N/A
MMB ACTION: If no, reject (red-line) all positive (not flagged with a "U") results.			
CONTRACTOR ACTION: List all exceptions and attach to checklist.			
For any concentrations above CRDL do duplicate injections agree to within ± 20% RSD?	[✓]	___	___
If no, was analysis repeated at least once?	[___]	___	✓
MMB ACTION: If no, flag result reported on Form I as estimated (J) when RSD is between 20 to 50%. If RSD is above 50%, reject (red-line).			
If yes, was second run within ± 20% RSD?	[___]	___	✓
MMB ACTION: If no, do as above.			

A.2.3.11 Form VIII (Standard Addition Results)

	YES	NO	N/A
Are any MSA analyses missing from Form VII?	___	[✓]	___
Do any computation/transcription errors exceed 10% of reported values?	___	[✓]	___
ACTION: If yes, prepare Telephone Record Log, contact laboratory for corrected data, and correct errors with red pencil and initial.			
Was "special quantitation procedure" followed correctly?	[✓]	___	___
ACTION: If no, note exceptions under "Contract Problems/Non-Compliance" of data assessment narrative, or prepare a separate list.			

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Title: Appendix A.3: Data Acceptability Narrative

Case# 7765/3181B Site DAYTON T. BROWN
Lab CHEMTECH

A.3.1 Are all data of acceptable quality? Yes ___ No ✓

If no, list exceptions with reason(s) for rejection of qualification as estimated value (J).

① Cd; Pb; Ni; Samples MBL 132, 168 SLUDGE
: Data flagged as estimated 'J'; serial dilution % difference is outside the control limits of 10%, within 100% and not flagged with 'E'. Indication of chemical or physical interferences.

② Se; Samples MBL 132, 168 SLUDGE
: Data flagged as estimated 'J'; matrix spike value is < 50%, an indication of a low bias.

MMB Reviewer: Frank J. Mennis Date: 2-09-88
Signature

Verified by: [signature] Date: 2-11-88
Signature

5266b

WA85-0830 - AMENDMENT THREE (3)
U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Rev. 17
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Date 9/1/87 8H

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Chemtech Consulting Group Case No. 7765/3181B
SOW No. 785 Q.C. Report No. G2- 932

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MBL 132	G2-932-01		
MBL 168	G2-932-02		

Comments:

ICP interelement and background corrections applied? Yes X No ____

If yes, corrections applied before X or after ____ generation of raw data.

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), A (for Flame AA) or F (for Furnace AA).

U - Indicates element was analyzed for but not detected. Report with the instrument 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.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

r - Indicates the correlation coefficient for method of standard addition is less than 0.995

M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

639 - AMENDMENT THREE (3)

Ref. 17
p. 60-f168

Form I

EPA Contract Laboratory Program
le Management Office
. Box 818 - Alexandria, VA 22313
03/557-2490 FTS: 8-557-2490

EPA Sample No. MBL 132

Date 9/1/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 7765/3181B

SOW NO. 785

Lab Receipt Date 7/30/87

LAB SAMPLE ID. NO. G2-932-01

QC REPORT NO. -G2- 932

Elements Identified and Measured

Concentration: Low _____ Medium X

Matrix: Water _____ Soil _____ Sludge X Other _____

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

1. Aluminum	50500	P	13. Magnesium	[2600]	P
2. Antimony	29U	P N	14. Manganese	628	P
3. Arsenic	40.6	F N	15. Mercury	0.45U	
4. Barium	2250	P	16. Nickel	159	P J
5. Beryllium	~~[3.7]~~ 53.8	AY	17. Potassium	446U	A
6. Cadmium	194	P J	18. Selenium	4.74	F SN J
7. Calcium	12600	P	19. Silver	29.6	P
8. Chromium	43100	P	20. Sodium	8410	P
9. Cobalt	[18.5]	P	21. Thallium	7.1U	F N
10. Copper	3060	P	22. Vanadium	646	P
11. Iron	122000	P	23. Zinc	99000	P
12. Lead	1290	FP N AY J	Percent Solids (%)	22.4	
Cyanide	21				

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: Color: Before- Brown After- light yellow Texture: coarse
Dir. FACTOR FOR CN: x 62.5

Lab Manager [signature]

IFB Amend. One

Ref. 17
P. 61 of

...5839 - AMENDMENT THREE (3)

Form I

...EPA Contract Laboratory Program
...ple Management Office
...O. Box 818 - Alexandria, VA 22313
...03/557-2490 FTS: 8-557-2490

EPA Sample No. MBL 168

Date 9/1/87

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 7765/3181B

SOW NO. 785

Lab Receipt Date 7/30/87

LAB SAMPLE ID. NO. G2-932-02

QC REPORT NO. G2-932

Elements Identified and Measured

Concentration: Low _____ Medium +

Matrix: Water _____ Soil _____ Sludge + Other _____

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

1.	Aluminum	44400	P	13.	Magnesium	[2400]	P
2.	Antimony	26U	P N	14.	Manganese	318	P
3.	Arsenic	~~30.7~~ 36.6 mg	P S N (36.7)	15.	Mercury	0.4U	
4.	Barium	2140	P	16.	Nickel	80	P J
5.	Beryllium	2.2U	P	17.	Potassium	400U	A
6.	Cadmium	94.2	P J	18.	Selenium	1.6U	E N J
7.	Calcium	5740	P	19.	Silver	15	P
8.	Chromium	27000	P	20.	Sodium	[1370]	P
9.	Cobalt	[16.2]	P	21.	Thallium	6.4U	F N
10.	Copper	3680	P	22.	Vanadium	386	P (386)
11.	Iron	79700	P	23.	Zinc	62900	P
12.	Lead	575	P NAY J		Percent Solids (%)	25.0	
	Cyanide	45.2					

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: Color: Before- Brown. After- light Yellow. Texture: Coarse

Lab Manager E Hecker

IFB Amend. One

Ret. 1+
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RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO:	FROM:	DATE
Leon Lazurus	Regina Mulcahy	TIME 9/18/87 1:00 PM

SUBJECT

CLP Organic Data Package for Quality Assurance Review

SUMMARY OF COMMUNICATION

The following CLP Organic Data packages are in the DCR awaiting review by the MMB.

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
Walmore Rd. FIT/SI	7786	York labs	Organics water soil	 7 8	BK958,959 =rins BK941,957 =TB	BK961,962
LiPari LF REM2/Enf	7774	Aquatec	Organics water	 9	BL166(TB)	None
Bog Creek REM3/Rem	7616	Acurex	Organics water	 13	BK329,334 =FB BK328,335 =TB	None
Port Wash LF REM2/Enf	7817	Compuchem	Organics soil water	 6 4	BJ640,637 =TB BJ639,636 =FB	None
Witmer Rd. FIT/SI	7667	GSRI	Organics soil water	 4 2	BK904(TB) BK905(rins)	None
Dayton T. Brown/FIT/SI	7765/ 3181B	Cenrcf	Organics sludge water	 2 1	BK849(TB)	None

CONCLUSIONS, ACTION TAKEN OR REQUIRED

LiPari LF REM2/Enf	7613	EAL	Organics soil water	 5 4	BJ593(FB) BJ594,595, 592=TB	BJ667,671

INFORMATION COPIES

TO:

File and Data Package

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

Ref. 17
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SURVEILLANCE AND MONITORING BRANCH REVIEW

Project Name/Site: DAYTON T. BROWN

Case Number: 7765/31810

Type Investigation (Circle One): Remedial (Site) Other _____

Contract No.: CS-01-7161

Laboratory: CENREF

Sample Identification Numbers:

Aqueous: BE549

Soil/Sediment: [illegible]

Superfund Account No.: [illegible]

Comments:

STANDARD OPERATING PROCEDURE

DR Review

Title: Attachment 1 - CLP Data Assessment Checklist (GC and GC/MS Analyses)

Date:
Number: HW-4
Revision: 2

SURVEILLANCE AND MONITORING BRANCH REVIEW

Project Name/Site: Dayton T. Brown

Case Number: 7765/3181B

Type Investigation (Circle One): Remedial Site Other

Contract No.: 68-01-7161

Laboratory: Centrif

Sample Identification Numbers:

Aqueous: BK849(TB)

Soil/Sediment: BK847-48

Superfund Account No.: STFAC2P922

Comments:

Date:
Number: HW-4
Revision: ~~2B~~ 2

Title: Attachment 2 - CLP Data Assessment Checklist (GC and GC/MS Analysis) - [redacted] DR REVIEW

[redacted] MONITORING MANAGEMENT BRANCH REVIEW

PART I: ~~Contractor and Preliminary Review~~

	YES	NO	N/A
1.0 Data Completeness and Deliverables			
1.1 Are any deliverables missing?		[✓]	
1.2 Was SMO CCS checklist included with package?	[✓]		

CONTRACTOR ACTION: If incomplete, list any missing data on the Missing Data Tracking Form (Attachment 5), and request missing information from laboratory by phone.

but pest/PCB section is missing - No letter

I. COVER LETTER/NARRATIVE

	YES	NO	N/A
2.0 Cover Letter/Case Narrative			
2.1 Is the Narrative or Cover Letter present?	[✓]		
2.2 Are the following items contained in the Narrative or Cover Letter:			
a. Case Number and/or SAS Number	[✓]		
b. Contract Number	[✓]		

II. QC SUMMARY

	YES	NO	N/A
3.0 Surrogate Percent Recovery Summaries (Form II)			
3.1 Are the Surrogate Percent Recovery Summaries present for each of the following matrix:			
a. Water	[✓]		
b. Soil	[✓]		
3.2 Are all the samples listed on the Surrogate Percent Recovery Summaries for each of the following matrix:			
a. Water	[✓]		
b. Soil	[✓]		

	YES	NO	N/A
3.3 Were outliers marked correctly with an asterisk?	[✓]		

CONTRACTOR ACTION: Circle all outliers in red.

3.4 Were two or more BN surrogates outside of contract specifications (or one surrogate less than 10% recovery) for any samples?		[✓]	
Method Blanks?		[✓]	
If yes, were samples reanalyzed?	[ ]		✓
Were blanks reanalyzed?	[ ]		✓

MMB ACTION: If Initial analysis and reanalysis both have 2 or more surrogate recoveries less than contract QC requirements (or one surrogate less than 10%) red-line all the detection limits (u's) and flag all positive data (hits) with a J.

If initial analysis and reanalysis both have two or more surrogate recoveries above contract QC requirements do not red-line detection limits (u's) but flag all positive values with a J.

When two or more surrogates for the blank are below contract QC requirements red-line all positive values, but not detection limits, for the associated samples, if sample surrogates are within or above QC limits; but if two or more sample surrogates are below contract QC limits, red-lined all sample data (Detection limits and positive data).

When two or more surrogates for the blank exceed contract QC requirements, validate sample data considering sample surrogate recoveries alone.

3.5 Were two or more acid surrogates outside of contract specifications (or one surrogate less than 10% recovery) for any samples?		[✓]	
Method Blanks?		[✓]	
If yes, were samples reanalyzed?	[ ]		✓
Were blanks reanalyzed?	[ ]		✓

MMB ACTION: If initial analysis and reanalysis both have 2 or more surrogate recoveries less than contract QC requirements (or one surrogate less than 10%) red-line all the detection limits (u's) and flag all positive data (hits) with a J.

If initial analysis and reanalysis both have two or more surrogate recoveries above contract QC requirements do not red-line detection limits (u's) but flag all positive values with a J.

When two or more surrogates for the blank are below contract QC requirements red-line all positive values, but not detection limits, for the associated samples, if sample surrogates are within or above QC limits; but if two or more sample surrogates are below contract QC limits, red-lined all sample data (Detection limits and positive data).

When two or more surrogates for the blank exceed contract QC requirements, validate sample data considering sample surrogate recoveries alone.

	YES	NO	N/A
3.6 Was one or more VOA surrogates outside of contract specifications for any samples?	✓	[ ]	
Blanks?		[✓]	
If yes, were samples reanalyzed?	[✓]		
Were blanks reanalyzed?	[ ]		✓

BK847 was out by 1% ∴ no Action (range 101-117% BK847 = 118%)

MMB ACTION: If initial analysis and reanalysis both have one or more surrogate recoveries below contract QC requirements red-line all detection limits (u's) and flag all positive values (hits) with a J.

If initial analysis and reanalysis both have one or more surrogate recoveries above contract QC requirements do not red-line detection limits but flag all positive values with a J.

When one or more surrogate recoveries for the blank are below contract QC requirements red-line all positive values but not the detection limits for the associated samples if sample surrogates are within or above contract QC limits; but if one or more sample surrogate recoveries are below QC limits red-line all data (Detection limits and positive values).

When one or more surrogate recoveries for the blank exceed contract requirement validate data for the associated samples considering sample surrogate recoveries alone.

	YES	NO	N/A
3.7 Was pesticides/PCB surrogate outside of contract specifications for any samples?		[✓]	
Method Blanks?		[✓]	

MMB ACTION: If recoveries are below contract requirement flag all associated positive results with a J and red-line all detection limits. If the recoveries are above contract requirement do not red-line the detection limits but flag all positive value with a J. However professional judgement should be used to determine whether a high bias exists due to coeluting interferences.

	YES	NO	N/A
5.0 Blanks			
5.1 Is the Reagent Blank Summary present? (Form IV)	[✓]		
5.2 Frequency of Analysis: for the analysis of VOA HSL compounds, has an reagent/method blank been analyzed for each set of samples or every 20 samples of similar matrix (e.g. - water, low soil, medium soil, etc.), whichever is more frequent?	[✓]		
5.3 For VOA's, has an instrument blank been analyzed at least once every 12 hours for each GC/MS system used?	[✓]		
5.4 For B/N/A's and Pesticides/PCB's, has a method blank been extracted and analyzed for each set of samples or every 20 samples of similar matrix and similar extraction technique?			
B/N/A's	[✓]		
Pesticides/PCB's	[✓]		
5.5 Has the method blank for B/N/As and Pesticides/PCBs been run on the same GC/MS or GC system as the samples?	[✓]		
6.0 Contamination (Reagent Blank Summary - Form IV)			
6.1. Do any method/instrument/reagent blanks have positive results for: HSL +/or TIC VOA's?	✓	[ ]	
B/N?		[✓]	
Acids?		[✓]	
Pesticides?		[✓]	
PCBs?		[✓]	
6.2 Do any field/trip blanks have positive results for: HLS and/or TIC VOA's?	✓	[ ]	
B/N?		[ ]	✓
Acids?		[ ]	✓
Pesticides?		[ ]	✓
PCBs?		[ ]	✓

	YES	NO	N/A

CONTRACTOR ACTION: Prepare a list of the samples associated with each of the contaminated and/or missing method blanks (attach a separate sheet).

MMB ACTION: For common ~~VOA~~ blank contaminants found (e.g., methylene chloride, acetone, toluene and 2-butanone), phthalate esters reject (red-line) all associated positive results present at less than 10 times the blank contaminant levels; for all other contaminants reject (red-line) when all associated positive results are present at less than 5 times the blank contaminant levels. Do not reject any values reported with a "U" (detection limit values).

III SAMPLE DATA

9.0 Are the Traffic Report Forms present for all samples? [✓] ___ ___

CONTRACTOR ACTION: List missing Traffic Reports on Missing Data Tracking Form. (See 1.1)

10.0 Organic Analysis Data (FORM I)

10.1 Are the four (4) Organic Analysis Data Sheets (VOA, BNA, Pesticides and Tentatively Identified Compounds) with completed header information required on each page of Form I, present for each of the following.

a. Samples and/or fractions as appropriate [✓] ___ ___

b. Matrix spikes and matrix spike duplicates [✓] ___ ___

c. Blanks [✓] ___ ___

CONTRACTOR ACTION: List Missing or incomplete Data Sheets on missing Data Tracking Form. (See 1.1)

10.2 Are the VOA/BNA Reconstructed Ion Chromatograms for each sample, the mass spectra for the identified compounds, and the Data System Printouts (Quant. list) included in the sample package for each of the following?

a. Samples and/or fractions as appropriate [✓] ___ ___

b. Matrix spikes and matrix spike duplicates (Mass spectra not required) [✓] ___ ___

c. Blanks [✓] ___ ___

	YES	NO	N/A
10.3 Are the response factors shown in the Quant Lists?	[✓]		
CONTRACTOR ACTION: List Missing or incomplete Reconstructed Ion Chromatograms, mass spectra and Data System printouts on the Missing Data Tracking Form (See 1.1).			
10.4 Are the Tentatively Identified Compounds (Form I, Part B) present and include scan number and estimated concentration?	[✓]		
CONTRACTOR ACTION: List missing TICs, Form I on Missing Data Tracking Form (See 1.1).			
10.5 Are the lab generated standard mass spectra of the identified compounds for each sample present?			
a. Volatile standard spectra	[✓]		
b. Semi-volatile standard spectra	[✓]		
CONTRACTOR ACTION: List missing mass spectra on Missing Data Tracking Form (See 1.1).			
11.0 GC/MS Evaluation			
11.1 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following.			
a. Samples and/or fractions as appropriate	[✓]		
b. Blanks	[✓]		
CONTRACTOR ACTION: If no, list the missing numbers on the Missing Data Tracking Form (See 1.1)			
12.0 Holding Times			
12.1 Have any holding times from date of collection been exceeded for:			
a. Volatiles			
Aqueous: 10 days* from time the lab receives the sample with 24 hours allowed from time of collection to lab receipt.		[✓]	

	YES	NO	N/A
Soil/Sediment: 10 days from time the lab receives the sample with 24 hours allowed from time of collection to lab receipt. *14 days if preserved with HCl (pH<2).	___	[✓]	___
b. NVOA's and Pesticides/PCBs:			
Aqueous (5 days from time of lab receipt to extraction, 40 days after extraction)	___	[ ]	✓
Soil/Sediment (10 days from time of lab receipt to extraction, 40 days after extraction)	✓	[ ]	___
Allow 24 hours from time of collection to lab receipt.			

CONTRACTOR ACTION: List the samples and their respective fractions with exceedances below. (Attach additional sheets if necessary.)

Table of Holding Time Exceedances

Sample	Sample Matrix	Fraction(s)	(See Traffic Report) Date Sampled	Date Lab Received	(See Form I) Date Extracted	(See Form I & Form V) Date Analyzed
BK847	Soil	BNA	7/29/87	7/30/87	8/19/87	9/1/87

MMB ACTION: If these holding times are exceeded, red-line detection limits and flag all positive values with a J.

13.0 Standards Data (GC/MS)

13.1 Are the Reconstructed Ion Chromatograms, Data System Printouts (Quant. list), and work sheet calculations present for the following:

a. Semi-volatiles (initial and continuing calibrations)	[✓]	___	___
b. Volatiles (initial and continuing calibrations)	[✓]	___	___

	YES	NO	N/A
13.2 Are the response factors also present in the Quan List?	[✓]		

CONTRACTOR ACTION: List missing or incomplete RICs, Quant. lists and work sheet calculations on Missing Data Tracking Form (See 1.1).

15.4 Internal Standard Area Summary (Form VIII)

15.4.1 Are the internal standard summary sheets (Form VIII) present and complete with all the required information?

VOA	[ ]	✓	
BNA	[ ]	✓	

CONTRACTOR: List missing or incomplete summary sheets on missing tracking form (see 1.1).

15.4.2 Are the internal standard areas within the upper and lower limits for each sample and blank analyzed under a given continuing calibration?

VOA	[ ]	✓	
BNA	[ ]	✓	

CONTRACTOR: List all the outliers.

Sample #	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

MMB ACTION: Use professional judgement to determine effect on data. Acceptance or rejection should not be based solely on the internal standard areas but should be determined in conjunction with other QA/QC data.

	YES	NO	N/A
18.0 GC Evaluation (Form X-PEST)			
18.1 Pesticide/PCB Identification - Are retention times of standard and sample compounds within the calculated retention time windows for the:			
Quantitation Column?	[✓]	___	___
Confirmation Column?	[✓]	___	___
CONTRACTOR ACTION: Circle all outliners in red.			
19.0 Package Copies			
19.1 Are all the xeroxing of readable quality?	[✓]	___	___
CONTRACTOR ACTION: If not, list appropriate page numbers on Missing Data Tracking Form (See 1.1).			

[redacted]

II QC SUMMARY RESULTS

3.0 Surrogate Spikes			
3.1 Were any transcription/calculation errors found between raw data and Surrogate Per Cent Recovery Form?	___	[✓]	___
MMB ACTION: Make any necessary corrections, and note errors under Conclusions.			
5.0 Blanks			
5.1 Chromatography - review the blank raw data - chromatograms, RICs, quan reports or data system printouts and spectra. Is chromatographic performance for each instrument acceptable for:			
VOA's?	[✓]	___	___
B/N & Acids?	[✓]	___	___
Pest/PCB's?	[✓]	___	___

	YES	NO	N/A
10.0 GC/MS Evaluation			
10.1 HSL Compounds			
10.1.1 Is the RRT of reported compounds within 0.06 RRT units of the standard RRT?	[✓]		
10.1.2 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]		
10.1.3 Are all ions present in the sample, but not present in the standard accounted for?	[✓]		
10.1.4 Do relative intensities specified above agree within 20% between the sample and standard spectra?	[✓]		

MMB ACTION: Use professional judgment to determine acceptability of data: if it is determined that incorrect ID's were made, all such data should be red-lined and changed to ~~an estimated (J) quantitation~~ appropriate detection limit. Ions greater than 10% in the sample spectrum but not present in the standard spectrum must be considered and accounted for.

	YES	NO	N/A
10.1.5 Check at least 2 of all positive values. Were any errors found in: Transcriptions?		[✓]	
Calculations?		[✓]	

MMB ACTION: Make any necessary corrections and note errors under Conclusions.

	YES	NO	N/A
10.2 Tentative ID - Non-HSL Compounds			
10.2.1 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% present in the sample mass spectrum?	[✓]		
10.2.2 Do relative intensities specified above agree within 20% between the sample and reference spectra?	[✓]		
10.2.3 Are molecular ions present in reference spectrum present in sample spectrum?	[✓]		

	YES	NO	N/A
10.2.4 Are all non-HSL compounds classified as tentatively identified reported with estimated quantitation and detection limits?	[✓]		

MMB ACTION: Use professional judgment to determine acceptability of data. If data is considered to be unacceptable, the tentative ID should be changed to "unknown".

11.0 Holding Times

	YES	NO	N/A
11.1 Have all associated sample data which have exceeded holding times been red-lined on the data sheet (including detection limits) indicating rejection?	[✓]		✓

MMB ACTION: Make any necessary corrections.

12.0 GC Evaluation

	YES	NO	N/A
12.1 Do chromatograms and data system printouts confirm retention times, retention time windows, and reported values (Forms IX-PEST 1 and X-PEST 2)?	[✓]		
12.2 Do positive identifications have proper dissimilar column analysis?	[ ]		✓
12.3 Are retention times of standard and sample compounds within the calculated retention times windows for the:			
No Hits — Quantitation Column?	[ ]		✓
Confirmation Column?	[ ]		✓
12.4 If concentration is sufficient, is GC/MS confirmation provided? (>10 µg/ml in the extract)	[ ]		✓

MMB ACTION: Reject (red-line) all positive results (meeting quantitation column criteria, but missing confirmation by a second column or GC/MS (if appropriate). Also reject (red-line) all positive results not meeting retention time windows unless associated standard compounds are similarly biased.

Ref. 17

STANDARD OPERATING PROCEDURE

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Title: Attachment 1 - CLP Data Assessment Checklist
(GC and GC/MS Analysis) DR
PART II: MMB Review - [redacted] REVIEW

Date:
Number: HW-4
Revision: 2

	YES	NO	N/A
12.5 Check 10% of all positive values. Were any errors found in:			
Transcriptions?	___	[___]	✓
Calculations?	___	[___]	✓

MMB ACTION: Make any necessary corrections and note errors under Conclusions.

III SAMPLE DATA PACKAGE

8.0 Traffic Report

8.1 Do the Traffic Reports indicate any problems with sample receipt, condition of samples or special notations affecting the quality of the data?	✓	[ ]	___

MMB ACTION: Use professional judgment in evaluating any effect on the quality of the data.

Trip blank - BK 849 has small bubbles in both vial

"J" value on all hits!

Title: Attachment 2 - CLP Data Assessment Checklist
(GC and GC/MS Analysis) DR
PART II: MMB Review - [redacted] REVIEW

CASE # 7765/3181B LAB CENREF SITE Dayton T. Brown

19.0 Conclusions: (NOTE: Reviewers must red-line unacceptable data on sample data (FORM I) sheets; red-line data does not imply the compound is not present). Only the MMB reviewer has the authority to red-line unacceptable data. The letter J indicates an estimated value. In addition to the two definitions stated in the contract it also implies that the analyte is present but the quantitative value contains an unspecified degree of error. If an accurate quantity is desired, resampling/~~analysis~~ and reanalysis is recommended.

19.1 Data Assessment Method blank measures laboratory contamination caused by dirty glassware, etc. In order to be valid, the concentration of an analyte in a sample must be at least 5 or 10 times (depending on the analyte) the concentration of that analyte present in the method blank. Red-lined methylene chloride as method blank contamination in BK849.

Trip blank consists of analyte free water sealed in a 40ml vial that is taken into the field during sampling. Trip blank contamination is caused by contamination of samples in the field. In order to be valid, the concentration of an analyte in a sample must be at least 5 or 10 times (depending on the analyte) the concentration of that analyte present in the trip blank. The following compounds were red-lined as trip blank contamination : methylene chloride, acetone and toluene in BK847; methylene chloride in BK848.

The amount of analyte in a sample changes with time. If specified holding times are exceeded, the data may not be accurate. All positive values in BK847 (Semi-Volatiles) were flagged with a "J" (estimate) and all detection limit values were red-lined for exceeding extraction/holding time.

Trip blank/VOA BK849 had small bubbles present in both vials. Positive values were flagged with a "J" (estimate).

19.2 Contract Problems/Non-compliance

Reviewer's Signature: George Karras Date: 12/14/87

Verified By: [illegible] Date: 12/15/87

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Cenref Labs Centana Energy Corporation

001

September 4, 1987

Case Narrative

Case: 7765/SAS 3181B
Region: II
Contract No.: 68-01-7161

Samples: BK847,BK848,BK847MS,BK847MSD--Low Level Sludges for VOA,BNA, and Pesticide analysis.

BK849,BK849MS,BK849MSD--Low level Waters for VOA analysis.

General

Two low level sludges plus associated matrix spike samples were analyzed for full HSL compounds. One low level water plus associated matrix spike samples was analyzed for VOAs only.

Sample Receiving/Chain of Custody

1. Both sludges were received in good condition on July 30, 1987. BK849 sample vials had small bubbles present. The paperwork for the case had the wrong Case/SAS number. SMO was contacted and the paperwork corrected. (See Telephone Record Log.) The sample tags were missing and the tag numbers were not listed on the Chain of Custody.

VOAs

1. All samples were analyzed within the holding time periods.

2. BK847 and BK848 were analyzed as low level soils. BK847,BK847MS, and BK847MSD all had high recoveries of Toluene-D8, indicating a matrix effect. All other surrogate recoveries were inside Q.C. Limits.

3. The surrogate recoveries for BK849, BK849MS, and BK849MSD were inside the Q.C. limits.

4. BK847MS had a high recovery of Chlorobenzene; all other spike recoveries were inside Q.C. Limits. The RPD for 1,1-Dichloroethene was high; all other RPDs were inside Q.C. Limits.

Executive Offices: P.O. Box 414320. Kansas City. Missouri 64141-4320
Mid-Continent Area: R.R. 2. Box 119. Liberal. Kansas 67901 • (316) 624-4292
Rocky Mountain Area: 695 North 7th. Brighton. Colorado 80601 • (303) 659-0497

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5. The spike recoveries and RPD values for the water sample were all within the Q.C. limits

6. The Hewlett-Packard data system does not report spectrum matches for TIC's when the probability of a match is less than one percent. All possible matches have been reported.

BNAs

1. BK847 and BK848 were listed on the CTR as medium level concentrations. They were extracted as medium level soils August 4, 1987. The extracts were analyzed by GC/FID and were not medium level. The samples were extracted as low level soils August 5, 1987. BK847 and BK848 had several very high surrogate recoveries while BK847MS and BK847MSD had a high recovery for Terpheny-d14 only. The samples were re-extracted on August 19, 1987. On re-extraction sample BK848 had surrogate recoveries inside the Q.C. limits while BK847 had a high recovery for Terphenyl-d14. This caused BK847 and BK848 to exceed the holding time for extraction by ten days.

2. BK847, BK847MS, BK847MSD had high recoveries of Terphenyl-D14, indicating a matrix effect.

3. All soil extracts were left at 5mL during the final concentration step due to precipitate formation.

4. The recoveries for Pyrene and Phenol were high. BK847MS had a high recovery of 4-Chloro-3-Methylphenol. The RPDs for 1,2,4-Trichlorophenol,Acenaphthene, and 1,4-Dichlorobenzene were high. The probable cause for this is due to interferences from the elevated baselines. All other spike recoveries and RPDs were inside Q.C. Limits.

5. The Hewlett-Packard data system does not report spectrum matches for TIC's when the probability of a match is less than one percent. All possible matches have been reported.

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003

Pesticides

1. Both samples were extracted and analyzed within the holding time period.

2. All surrogate recoveries were inside Q.C. Limits. The surrogates were diluted out for BK847 and BK848. Dilutions were necessary because of the high level of interfering peaks.

3. BK847MS had high spike recoveries for Heptachlor, Aldrin, and 4,4-DDT. BK847MSD had high spike recoveries for Heptachlor. The RPD values for Dieldrin, Endrin, and 4,4-DDT were outside the Q.C. limits. These recovery problems were probably due to the high level of interfering peaks.

4. No pesticides or PCBs were detected in any of the samples.

5. Occasionally the Nelson Analytical Software assigns inaccurate injection times. These times have been hand corrected on the chromatograms.

Sincerely,

Jack Berges
Laboratory Manager

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004

Optional Flags used for Reporting GC/MS Data

A - Aldol condensation product. This flag is used for tentatively identified compounds in soil samples when the compound is suspected aldol condensation byproduct of the extraction technique.

M - Analyte has not met the identification criteria but, in the opinion of the Mass Spectral Interpretation Specialist, the identification is correct.

This flag is used when the mass spectrum of the target analyte does not meet all of the criteria in the contract Task III, but the Mass Spectral Interpretation Specialist feels that the compound is actually present.

Sp- Spike compound.

This flag is used for Matrix Spike results to indicate that the compound was spiked into the sample before analysis.

Ken
Joel
Jenny
Russ
Dawn

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In Reference to Case No(s):
SAS 3181 B
Case 7765

005

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: July 30, 1987

Laboratory Name: Cenref Labs

Lab Contact: Lori Walter

Region: Region II

Regional Contact: Jean Kelb

Call Initiated By: X Laboratory ___ Region

In reference to data for the following sample number(s):

BK847, BK848, BK849

Summary of Questions/Issues Discussed:

1. We were expecting SAS 3181B/Case 7765. All paperwork & samples said SAS 3181B/Case 7732.
2. We were expecting 2 waters: 1 for full HSL, 1 for VOA. We only received the VOA sample
3. Sample BK848 Organics Traffic Report said "Sample for duplicate analysis."

Summary of Resolution:

1. Jean said the correct case # is 7765. I will change the paperwork and samples.
2. The Case is complete. We should not anticipate this other water
3. Duplicate analysis is not required

Lori Walter
Signature

7-30-87
Date

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

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Sample Number
BK 847

017

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cenref Labs
Lab Sample ID: >P5678
Sample Matrix: Sludge
Data release Authorized by: _____

Case No.: 7765/SAS 31818
QC Report No.: 7765/SAS 31818
Contract No.: 68-01-7161
Date Sample Received: 07/30/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/02/87 13:09
Conc/Dil factor: 3.4 pH : 5.9
Percent Moisture: (Not Decanted) 71.0%

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	34	U	78-87-5	1,2-Dichloropropane	17	U
74-83-9	Bromomethane	34	U	10061-02-6	Trans-1,3-Dichloropropene	17	U
75-01-4	Vinyl Chloride	34	U	79-01-6	Trichloroethene	17	U
75-00-3	Chloroethane	34	U	124-48-1	Dibromochloromethane	17	U
75-09-2	Methylene Chloride	~~28~~		79-00-5	1,1,2-Trichloroethane	17	U
67-64-1	Acetone	~~72~~	B	71-43-2	Benzene	17	U
75-15-0	Carbon Disulfide	17	U	10061-01-5	cis-1,3-Dichloropropene	17	U
75-35-4	1,1-Dichloroethene	17	U	110-75-8	2-Chloroethylvinylether	34	U
75-34-3	1,1-Dichloroethane	17	U	75-25-2	Bromoform	17	U
156-60-5	Trans-1,2-Dichloroethene	17	U	108-10-1	4-Methyl-2-Pentanone	49	
67-66-3	Chloroform	17	U	591-78-6	2-Hexanone	34	U
107-02-2	1,2-Dichloroethane	17	U	127-18-4	Tetrachloroethene	360	
78-93-3	2-Butanone	34	U	79-34-5	1,1,2,2-Tetrachloroethane	17	U
71-55-6	1,1,1-Trichloroethane	17	U	108-88-3	Toluene	~~[illegible]~~	
56-23-6	Carbon Tetrachloride	17	U	108-90-7	Chlorobenzene	17	U
108-05-4	Vinyl Acetate	34	U	100-41-4	Ethylbenzene	49	
75-27-4	Bromodichloromethane	17	U	100-42-5	Styrene	17	U
					Total Xylenes	17	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a concentration of 3.0 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 blank contamination and warns data the user to take appropriate action.

OPTIONAL FLAGS

Sp- Spike compound. The compound is a Matrix Spike compound.

A - Aldol Condensation product. Suspected condensation product in BNA soil extract.

M- Analyte has not met the identification criteria but, in the opinion of the Mass Spectral Interpretation Specialist, the identification is correct.

OK 9/2/87 KK

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Lab Name : Cenref Labs
Case No : 7765/SAS 31818

Sample Number
BK 847

018

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 08/19/87
Date Analyzed: 9/01/87 19:46
Conc/Dil Factor: 17
Percent Moisture (Decanted) 71%

GPC Cleanup __ Yes ✓ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	6900	
111-44-4	bis(-2-Chloroethyl)Ether	5600	U
95-57-8	2-Chlorophenol	5600	U
541-73-1	1,3-Dichlorobenzene	5600	U
106-46-7	1,4-Dichlorobenzene	5600	U
100-51-6	Benzyl Alcohol	5600	U
95-50-1	1,2-Dichlorobenzene	5600	U
95-48-7	2-Methylphenol	5600	U
39638-32-9	bis(2-chloroisopropyl)Ether	5600	U
106-44-5	4-Methylphenol	5600	U
621-64-7	N-Nitroso-Di-n-Propylamine	5600	U
67-72-1	Hexachloroethane	5600	U
98-95-3	Nitrobenzene	5600	U
78-59-1	Isophorone	5600	U
88-75-5	2-Nitrophenol	28000	U
105-67-9	2,4-Dimethylphenol	5600	U
65-85-0	Benzoic Acid	4000	JM
111-91-1	bis(-2-Chloroethoxy)Methane	5600	U
120-83-2	2,4-Dichlorophenol	5600	U
120-82-1	1,2,4-Trichlorobenzene	5600	U
91-20-3	Naphthalene	1200	J
106-47-8	4-Chloroaniline	5600	U
87-68-3	Hexachlorobutadiene	5600	U
59-50-7	4-Chloro-3-Methylphenol	5600	U
91-57-6	2-Methylnaphthalene	1800	J
77-47-4	Hexachlorocyclopentadiene	5600	U
88-06-2	2,4,6-Trichlorophenol	5600	U
95-95-4	2,4,5-Trichlorophenol	28000	U
91-58-7	2-Chloronaphthalene	5600	U
88-74-4	2-Nitroaniline	28000	U
131-11-3	Dimethyl Phthalate	5600	U
208-96-8	Acenaphthylene	5600	U
99-09-2	3-Nitroaniline	28000	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	5600	U
51-28-5	2,4-Dinitrophenol	28000	U
100-02-7	4-Nitrophenol	28000	U
132-64-9	Dibenzofuran	5600	U
121-14-2	2,4-Dinitrotoluene	5600	U
606-20-2	2,6-Dinitrotoluene	5600	U
84-66-2	Diethylphthalate	5600	U
7005-72-3	4-Chlorophenyl-phenylether	5600	U
86-73-7	Fluorene	5600	U
100-01-6	4-Nitroaniline	28000	U
534-52-1	4,6-Dinitro-2-Methylphenol	5600	U
86-30-6	N-Nitrosodiphenylamine (1)	5600	U
101-55-3	4-Bromophenyl-phenylether	5600	U
118-74-1	Hexachlorobenzene	5600	U
87-86-5	Pentachlorophenol	28000	U
85-01-8	Phenanthrene	5600	U
120-12-7	Anthracene	5600	U
84-74-2	Di-n-Butylphthalate	5600	U
206-44-0	Fluoranthene	5600	U
129-00-0	Pyrene	5600	U
85-68-7	Butylbenzylphthalate	5600	U
91-94-1	3,3'-Dichlorobenzidine	11000	U
56-55-3	Benzo(a)Anthracene	5600	U
117-81-7	bis(2-Ethylhexyl)Phthalate	85000	J
218-01-9	Chrysene	5600	U
117-84-0	Di-n-Octyl Phthalate	5600	U
205-99-2	Benzo(b)Fluoranthene	5600	U
207-08-9	Benzo(k)Fluoranthene	5600	U
50-32-8	Benzo(a)Pyrene	5600	U
193-39-5	Indeno(1,2,3-cd)Pyrene	5600	U
53-70-3	Dibenz(a,h)Anthracene	5600	U
191-24-2	Benzo(g,h,i)Perylene	5600	U

(1)-Cannot be separated from diphenylamine

7/84

OK
9/2/87
KK

Ref. 17
p. 85-168

Lab Name : Cenref Labs
Case No : 7765 SAS 3181R

Sample Number
BK847

019

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 08/05/87
Date Analyzed: 09/02/87
Conc/Dil Factor: 10
Percent Moisture (Decanted) 71

GPC Cleanup __ Yes X_ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg
319-84-6	Alpha-BHC.	27.0 U
319-87-7	Beta-BHC	27.0 U
319-86-8	Delta-BHC.	27.0 U
58-89-9	Gamma-BHC (Lindane). . .	27.0 U
76-44-8	Heptachlor	27.0 U
309-00-2	Aldrin	27.0 U
1024-57-3	Heptachlor Epoxide . . .	27.0 U
959-98-8	Endosulfan I	27.0 U
60-57-1	Dieldrin	55.0 U
72-55-9	4,4'-DDE	55.0 U
72-20-8	Endrin	55.0 U
33213-65-9	Endosulfan II.	55.0 U
72-54-8	4,4'-DDD	55.0 U
1031-07-8	Endosulfan Sulfate . . .	55.0 U
50-29-3	4,4'-DDT	55.0 U
72-43-5	Methoxychlor	270.0 U
53494-70-5	Endrin Ketone.	55.0 U
57-74-9	Chlordane.	270.0 U
8001-35-2	Toxaphene.	550.0 U
12674-11-2	Aroclor-1016.	270.0 U
11104-28-2	Aroclor-1221.	270.0 U
11141-16-5	Aroclor-1232.	270.0 U
53469-21-9	Aroclor-1242.	270.0 U
12672-29-6	Aroclor-1248.	270.0 U
11097-69-1	Aroclor-1254.	550.0 U
11096-82-5	Aroclor-1260.	550.0 U

Vi = Volume of extract injected (uL)
Vs = Volume of water extracted (ml.)
Ws = Weight of sample extracted (g)
Vt = Volume of Total extract (uL)

Vs Ws 30.2 Vt 5000 uL Vi 5 uL

CK 9/4/87
KK

Ref. 17
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oratory Name: Conrad Labs
ase No: 7765 KAS 3181B

Sample Number
RK 847

020

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 76131	1,1,2-Trichloro-1,2,2-Trifluoroethane	VOA	294	120 J
2. -	C-8 Alkene mf. C_8H_{16}	VOA	552	41 J
3. -	Dimethyl Cyclohexane	VOA	637	24 J
4. -	Dimethyl Cyclohexane	VOA	654	21 J
5. -	Unknown	VOA	673	38 J
6. -	Unknown	VOA	742	51 J
7. -	Unknown	VOA	805	55 J
8.				
9. -	Chlorobenzaldehyde	BNA	465	100 000 J
10. 629505	Tridecane	BNA	709	9000 J
11. -	Unknown Alkene	BNA	920	11000 J
12. -	Unknown Acid	BNA	928	10000 J
13. 629679	Pentadecane	BNA	964	13000 J
14. 544763	Hexadecane	BNA	1080	12000 J
15. -	Tetramethyl butyl Phenol	BNA	1107	25000 J
16. 629787	Heptadecane	BNA	1191	39000 J
17. -	Unknown Alkane	BNA	1199	55000 J
18. -	Unknown	BNA	1205	23000 J
19. -	Tetramethyl butyl Phenol	BNA	1215	36000 J
20. -	Nonyl Phenol + unknown	BNA	1223	47000 J
21. -	Nonyl Phenol	BNA	1231	32000 J
22. -	Nonyl Phenol	BNA	1238	24000 J
23. -	Unknown	BNA	1247	23000 J
24. -	Nonyl Phenol	BNA	1258	33000 J
25. -	Tetramethyl butyl Phenol	BNA	1266	23000 J
26. 593453	Octadecane	BNA	1296	26000 J
27. -	Unknown Alkene	BNA	1307	30000 J
28. 629925	Nonadecane	BNA	1394	32000 J
29.				
30.				

OK
9/2/87
KK

Ref. 17
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Sample Number
BK 848

100

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cenref Labs
Lab Sample ID: >P5629
Sample Matrix: Sludge
Data release Authorized by: [signature]

Case No.: 7765/SAS 31818
QC Report No.: 7765/SAS 31818
Contract No.: 68-01-7161
Date Sample Received: 07/30/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/02/87 14:18
Conc/Dil factor: 3.8 pH : 6.9
Percent Moisture: (Not Decanted) 74.0%

C.A.S. Number		ug/l or ug/kg (Circle One)		C.A.S. Number		ug/l or ug/kg (Circle One)	
74-87-3	Chloromethane	38	U	78-87-5	1,2-Dichloropropane	19	U
74-83-9	Bromomethane	38	U	10061-02-6	Trans-1,3-Dichloropropene	19	U
75-01-4	Vinyl Chloride	38	U	79-01-6	Trichloroethene	19	U
75-00-3	Chloroethane	38	U	124-48-1	Dibromochloromethane	19	U
75-09-2	Methylene Chloride	~~14~~	~~J~~	79-00-5	1,1,2-Trichloroethane	19	U
67-64-1	Acetone	38	U	71-43-2	Benzene	19	U
75-15-0	Carbon Disulfide	19	U	10061-01-5	cis-1,3-Dichloropropene	19	U
75-35-4	1,1-Dichloroethene	19	U	110-75-8	2-Chloroethylvinylether	38	U
75-34-3	1,1-Dichloroethane	19	U	75-25-2	Bromoform	19	U
156-60-5	Trans-1,2-Dichloroethene	19	U	108-10-1	4-Methyl-2-Pentanone	38	U
67-66-3	Chloroform	19	U	591-78-6	2-Hexanone	38	U
107-02-2	1,2-Dichloroethane	19	U	127-18-4	Tetrachloroethene	16	J
78-93-3	2-Butanone	38	U	79-34-5	1,1,2,2-Tetrachloroethane	19	U
71-55-6	1,1,1-Trichloroethane	19	U	108-88-3	Toluene	19	U
56-23-4	Carbon Tetrachloride	19	U	108-90-7	Chlorobenzene	19	U
108-05-4	Vinyl Acetate	38	U	100-41-4	Ethylbenzene	19	U
75-27-4	Bromodichloromethane	19	U	100-42-5	Styrene	19	U
					Total Xylenes	19	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a concentration of 3.0 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 blank contamination and warns data the user to take appropriate action.

OPTIONAL FLAGS

Sp- Spike compound. The compound is a Matrix Spike compound.

A - Aldol Condensation product. Suspected condensation product in BNA soil extract.

M- Analyte has not met the identification criteria but, in the opinion of the MASS Spectral Interpretation Specialist, the identification is correct.

OK 9/2/87

Ref. 17
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Lab Name : Cenref Labs
Case No : 7765/SAS 3181B

| Sample Number |
| BK 848 |

101

ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 08/19/87
Date Analyzed: 9/01/87 18:57
Conc/Dil Factor: 19
Percent Moisture (Decanted) 74%

GPC Cleanup __ Yes ✓ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	6400	U
111-44-4	bis(-2-Chloroethyl)Ether	6400	U
95-57-8	2-Chlorophenol	6400	U
541-73-1	1,3-Dichlorobenzene	6400	U
106-46-7	1,4-Dichlorobenzene	6400	U
100-51-6	Benzyl Alcohol	6400	U
95-50-1	1,2-Dichlorobenzene	6400	U
95-48-7	2-Methylphenol	6400	U
39638-32-9	bis(2-chloroisopropyl)Ether	6400	U
106-44-5	4-Methylphenol	6400	U
621-64-7	N-Nitroso-Di-n-Propylamine	6400	U
67-72-1	Hexachloroethane	6400	U
98-95-3	Nitrobenzene	6400	U
78-59-1	Isophorone	6400	U
88-75-5	2-Nitrophenol	32000	U
105-67-9	2,4-Dimethylphenol	6400	U
65-85-0	Benzoic Acid	1300	JM
111-91-1	bis(-2-Chloroethoxy)Methane	6400	U
120-83-2	2,4-Dichlorophenol	6400	U
120-82-1	1,2,4-Trichlorobenzene	6400	U
91-20-3	Naphthalene	6400	U
106-47-8	4-Chloroaniline	6400	U
87-68-3	Hexachlorobutadiene	6400	U
59-50-7	4-Chloro-3-Methylphenol	6400	U
91-57-6	2-Methylnaphthalene	6400	U
77-47-4	Hexachlorocyclopentadiene	6400	U
88-06-2	2,4,6-Trichlorophenol	6400	U
95-95-4	2,4,5-Trichlorophenol	32000	U
91-58-7	2-Chloronaphthalene	6400	U
88-74-4	2-Nitroaniline	32000	U
131-11-3	Dimethyl Phthalate	6400	U
208-96-8	Acenaphthylene	6400	U
99-09-2	3-Nitroaniline	32000	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	6400	U
51-28-5	2,4-Dinitrophenol	32000	U
100-02-7	4-Nitrophenol	32000	U
132-64-9	Dibenzofuran	6400	U
121-14-2	2,4-Dinitrotoluene	6400	U
606-20-2	2,6-Dinitrotoluene	6400	U
84-66-2	Diethylphthalate	6400	U
7005-72-3	4-Chlorophenyl-phenylether	6400	U
86-73-7	Fluorene	6400	U
100-01-6	4-Nitroaniline	32000	U
534-52-1	4,6-Dinitro-2-Methylphenol	32000	U
86-30-6	N-Nitrosodiphenylamine (1)	6400	U
101-55-3	4-Bromophenyl-phenylether	6400	U
118-74-1	Hexachlorobenzene	6400	U
87-86-5	Pentachlorophenol	32000	U
85-01-8	Phenanthrene	6400	U
120-12-7	Anthracene	6400	U
84-74-2	Di-n-Butylphthalate	6400	U
206-44-0	Fluoranthene	6400	U
129-00-0	Pyrene	6400	U
85-68-7	Butylbenzylphthalate	6400	U
91-94-1	3,3'-Dichlorobenzidine	13000	U
56-55-3	Benzo(a)Anthracene	6400	U
117-81-7	bis(2-Ethylhexyl)Phthalate	34000	
218-01-9	Chrysene	6400	U
117-84-0	Di-n-Octyl Phthalate	6400	U
205-99-2	Benzo(b)Fluoranthene	6400	U
207-08-9	Benzo(k)Fluoranthene	6400	U
50-32-8	Benzo(a)Pyrene	6400	U
193-39-5	Indeno(1,2,3-cd)Pyrene	6400	U
53-70-3	Dibenz(a,h)Anthracene	6400	U
191-24-2	Benzo(g,h,i)Perylene	6400	U

(1)-Cannot be separated from diphenylamine

OK 9/2/87 KK

7/85

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Lab Name : Cenref Labs
Case No : 7765 SAS 31818

Sample Number
BKR49

ORGANICS ANALYSIS DATA SHEET
(Page 3)

Pesticides/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 08/05/87
Date Analyzed: 09/02/87
Conc/Dil Factor: 10
Percent Moisture (Decanted) 74

GPC Cleanup __ Yes X_ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg
319-84-6	Alpha-BHC.	30.0 U
319-87-7	Beta-BHC	30.0 U
319-86-8	Delta-BHC.	30.0 U
58-89-9	Gamma-BHC (Lindane). . .	30.0 U
76-44-8	Heptachlor	30.0 U
309-00-2	Aldrin	30.0 U
1024-57-3	Heptachlor Epoxide . . .	30.0 U
959-98-8	Endosulfan I	30.0 U
60-57-1	Dieldrin	60.0 U
72-55-9	4,4'-DDE	60.0 U
72-20-8	Endrin	60.0 U
33213-65-9	Endosulfan II.	60.0 U
72-54-8	4,4'-DDD	60.0 U
1031-07-8	Endosulfan Sulfate . . .	60.0 U
50-29-3	4,4'-DDT	60.0 U
72-43-5	Methoxychlor	300.0 U
53494-70-5	Endrin Ketone.	60.0 U
57-74-9	Chlordane.	300.0 U
8001-35-2	Toxaphene.	600.0 U
12674-11-2	Aroclor-1016.	300.0 U
11104-28-2	Aroclor-1221.	300.0 U
11141-16-5	Aroclor-1232.	300.0 U
53469-21-9	Aroclor-1242.	300.0 U
12672-29-6	Aroclor-1248.	300.0 U
11097-69-1	Aroclor-1254.	600.0 U
11096-82-5	Aroclor-1260.	600.0 U

Vi = Volume of extract injected (uL)
Vs = Volume of water extracted (mL)
Ws = Weight of sample extracted (g)
Vt = Volume of Total extract (uL)

Vs Ws 30.9 Vt 5000 uL Vi 5 uL

OK 9/4/87 KK

Ref. 17
p. 90 of 168
103

Laboratory Name: Cenret Labs

Case No: 7765/SAS 3181B

Sample Number: BK 848

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	NO volatile compounds Detected	VOA	—	—
2.				
3. —	unknown	BNA	100	~~3800~~ JB
4. 4436753	3-Hexene-2,5-dione	BNA	156	~~3800~~ JBA
5. —	Ethylmethyl benzene	BNA	186	8300 J
6. —	Trimethyl Benzene	BNA	198	10,000 J
7. —	Trimethyl Benzene	BNA	244	31,000 J
8. —	Trimethyl Benzene	BNA	296	11,000 J
9. —	unknown	BNA	661	2,600 J
10. —	unknown	BNA	924	3200 J
11. —	unknown	BNA	950	3200 J
12. —	Tetramethylbutyl phenol	BNA	1104	7100 J
13. —	unknown Alkane	BNA	1132	3200 J
14. —	unknown Alkane	BNA	1195	5100 J
15. —	unknown	BNA	1244	2600 J
16. —	unknown Alkane	BNA	1303	5800 J
17. —	unknown Alkane	BNA	1385	2600 J
18. —	unknown Alkane	BNA	1391	3800 J
19. —	unknown	BNA	1585	4500 J
20. —	unknown	BNA	1612	5100 J
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

OK
9/2/87
KK

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Sample Number
RK R49

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Cenref Labs
Lab Sample ID: >P5640
Sample Matrix: Water
Data release Authorized by: [signature]

Case No.: 7765/SAS 3181R
QC Report No.: 7765/SAS 3181B
Contract No.: 68-01-7161
Date Sample Received: 07/30/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/04/87 15:04
Conc/Dil factor: 1.0 pH :7.0
Percent Moisture: (Not Decanted) 100%

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10	U	78-87-5	1,2-Dichloropropane	5	U
74-83-9	Bromomethane	10	U	10061-02-6	Trans-1,3-Dichloropropene	5	U
75-01-4	Vinyl Chloride	10	U	79-01-6	Trichloroethene	5	U
75-00-3	Chloroethane	10	U	124-48-1	Dibromochloromethane	5	U
75-09-2	Methylene Chloride	~~1~~	~~JB~~	79-00-5	1,1,2-Trichloroethane	5	U
67-64-1	Acetone	65	J	71-43-2	Benzene	5	U
75-15-0	Carbon Disulfide	5	U	10061-01-5	cis-1,3-Dichloropropene	5	U
75-35-4	1,1-Dichloroethene	5	U	110-75-8	2-Chloroethylvinylether	10	U
75-34-3	1,1-Dichloroethane	5	U	75-25-2	Bromoform	5	U
156-60-5	Trans-1,2-Dichloroethene	5	U	108-10-1	4-Methyl-2-Pentanone	10	U
67-66-3	Chloroform	5	U	591-78-6	2-Hexanone	10	U
107-02-2	1,2-Dichloroethane	5	U	127-18-4	Tetrachloroethene	5	U
78-93-3	2-Butanone	38	J	79-34-5	1,1,2,2-Tetrachloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U	108-88-3	Toluene	5	~~U~~ J
56-23-6	Carbon Tetrachloride	5	U	108-90-7	Chlorobenzene	5	U
108-05-4	Vinyl Acetate	10	U	100-41-4	Ethylbenzene	5	U
75-27-4	Bromodichloromethane	5	U	100-42-5	Styrene	5	U
					Total Xylenes	5	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a concentration of 3.0 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 blank contamination and warns data the user to take appropriate action.

OPTIONAL FLAGS

Sp- Spike compound. The compound is a Matrix Spike compound.

A - Aldol Condensation product. Suspected condensation product in BNA soil extract.

OK 9/2/87 KC

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Laboratory Name: CONREF LABS

Case No: 7765 / SAS3181B

Sample Number: BK849

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Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	No volatile compounds detected	VOA	—	—
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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22.				
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26.				
27.				
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30.				

OK
9/2/87
KK

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RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: Leon Lazurus

FROM: Regina Mulcahy

DATE 9/13/87

TIME 12:30 PM

SUBJECT: CLP Organic Data Package for Quality Assurance Review

SUMMARY OF COMMUNICATION

The following CLP Organic Data packages are in the DCR awaiting review by the MMB.

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
Bog Creek Farm/REM 3/Rem	7461	Acurex	Organics water	20	BK305,299, 324 = FB BK 296,325 = TB	None
LiPari LF Rem 2/Enf	7774/ 3191B	Compuchem	Organics water	13	BL155(TB)	BL156,157
Batavia LF GCA/Enf overs	7460	Nanco	Organics water	6	BJ678	None
Batavia LF GCA/Enf overs	7332	Pac.Analyt.	Organics water soil	2 3	None	None
Brewster Wellfield/REM 3/Rem overs	7897	CTL	Organics water	4	BN005(TB) BN006(FB)	None
Brewster WF REM 3/Rem overs	7897	Aquatec	Organics soil	7	None	BN009,011
W.R.Grace REM 3/Enf	7785	US Testing	Organics soil water	3 1	BL074(TB)	None
DuPONT Stauffer Duramate/FIT/SI	7816	Reg.Anal. Pacif.Anal.	Organics soil water	9 3	BL319,320 =rins BL318(TB)	BL307,308
Dayton T. Brown/FIT/SI	7732	Alliance	Organics soil water	4 7	BK518,519 =TB BK520-522 =rins	

CONTINUATIONS, ACTION TAKEN OR REQUIRED

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INFORMATION COPIES TO:
File and Data Package

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 8300-8 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

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September 4, 1987

Mr. Tony Nesky
RAS Sampling Coordinator
SMO Viar and Company
209 Madison Street
Alexandria, VA 22314

Subject: Analytical Results - Soil and Water Samples - Case 7732
(Alliance 3-720-016)

Dear Mr. Nesky:

Enclosed please find the data package for samples submitted under Case 7732. This set consisted of 7 water samples and 4 soils which were received at Alliance Technologies Corporation on July 29, 1987. The samples and each of two matrix spikes per matrix underwent one or more of the following analyses:

Volatile Organic Analysis
Base/Neutral and Acid Extractable Analysis
Pesticide and PCB Analysis

Additional comments pertinent to the analysis of these samples are provided on the pages immediately following.

Please do not hesitate to contact the undersigned with any questions or concerns.

Sincerely,

Joanna M. Hall

Joanna M. Hall
Organic Section Manager
Chemistry Division

Approved by:

Neil Ram (AT)

Neil M. Ram, Ph.D.
Manager
Chemistry Division

Enclosure

cc: EMSL/LV
Region II
F. Babin
J. Haggerty

JH/ll

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Contractor: Alliance

Alliance Project No. 68-01-7145

Narrative for Case 7732, Samples Received 7/29/87

Sample Receipt

1. Seven (7) water samples and four (4) soils were received on July 29, 1987, and were analyzed for all of the following:

   Volatile Organic Analysis
   Base/Neutral and Acid Extractable Analysis
   Pesticide and PCB Analysis

2. Upon receipt, the submitted samples were entered into the Master Log Book and assigned Alliance Control Numbers as show below:

VOA	Matrix	EPA ID	BNA/Pest/PCB	Matrix	EPA ID
53562	Water	BK 518	53574	Water	BK 520
53563	Water	BK 519	53575	Water	BK 521
53564	Water	BK 520	53576	Water	BK 522
53565	Water	BK 521	53577	Water	BK 801
53566	Water	BK 522	53578	Soil	BK 804
53567	Water	BK 801	53579	Soil	BK 805
53568	Soil	BK 804	53580	Soil	BK 806
53469	Soil	BK 805	53581	Soil	BK 807
53570	Soil	BK 806	53582	Water	BK 939
53571	Soil	BK 807			
53572	Water	BK 939			

VOA	Matrix	EPA ID	BNA/Pest/PCB	Matrix	EPA ID
53568 MS	Soil	BK 804 MS	53578 MS	Soil	BK 804 MS
53568 MSD	Soil	BK 804 MSD	53578 MSD	Soil	BK 804 MSD
53572 MS	Water	BK 939 MS	53582 MS	Water	BK 939 MS
53572 MSD	Water	BK 939 MSD	53582 MSD	Water	BK 939 MSD

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VOA Narrative Case 7732
3-720-015

1. All samples were run within contract holding time.

2. All areas flagged with an (M) indicate manual integration.

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Narrative for Semi-Volatiles
Case 7732

1. All samples were extracted and analyzed within contract holding times.

2. Sample MBL1 has a Bis (2-ethylhexy) phthalate contamination that is within contract allowances.

3. Samples MBL2, BK804, BK804MS, BK804MSD, BK805, BK806, and BK807 have a large peak which was not searched since it eluted before the first semi-volatile compound.

4. All samples with tentatively identified compounds had at least one peak in which less than three matches were found.

Pesticides/PCB
3-720-015

1. All samples were analyzed within contract specified holding times.

2. Pesticide Evaluation Standards Summary:

   a. On run dates 8/27/87 - 8/29/87 pesticide Mix A was used to calculate the % RSD for all compounds instead of Evaluation Mix A due to integration problems.

   b. The retention time shift of DBC for Pesticide Mix A could not be calculated on the SP2250/2401 column due to co-elution with endrin ketone.

   c. On run dates 8/19-21/87 the retention time shift for DBC could not be calculated for sample BK520 due to an interfering peak. The analyst feels that the system was not out of control because the percent difference of all subsequent injections met contract criteria.

   d. On run dates 8/28-30/87 the retention shift for DBC could not be calculated for Aroc 1248, Aroc 1260 (0.25ng concentration), and Pest Mix B (0.05ng concentration) due to integration problems. The analyst feels that the system was not out of control because the percent difference for all standards injected after these injections met contract criteria.

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Pesticide/PCB Cross Reference

Date Standards Run	Column	Sample ID
8/19 - 21/87	SP2250/2401	MB1, BK939MSD, BK939MSD, BK520, BK521, BK522, BK801
8/25 - 26/87	SP2250/2401	MB1, BK939MS, BK939MSD
8/28 - 30/87	SP2250/2401	MB1, MB2, BK806, BK807, BK805, BK804, BK939MS, BK939MSD, BK804MS, BK804MSD
8/27 - 29/87	SP2100	MB2, BK804, BK805, BK806, BK807, BK804MS, BK804MSD

Dry Weight Case #7732
3-720-016

Sample ID	Allowance #	Percent moist	Wet Weight	Dry Weight
BK804	53578	2.2	29.0	28.36
BK805	53579	7.0	29.8	27.71
BK806	53580	4.1	30	28.77
BK807	53581	16.9	30.3	25.18
BK804MS	QC2844	2.2	30.0	29.34
BK804MSD	QC2845	2.2	30.0	29.34

$$\text{Calculation} = \frac{100 - \%\ \text{moisture}}{100} \times \text{Wet Weight} = \text{Dry Weight}$$

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ALLIANCE
Technologies Corporation

September 11, 1987

Mr. Tony Nesky
RAS Sampling Coordinator
SMO Viar and Company
209 Madison Street
Alexandria, VA 22314

Subject: Corrected Analytical Results
Pesticides / PCB's in Soil
Case 7732
(Alliance 3-720-016)

Dear Mr. Nesky:

Enclosed please find a revised pesticide data package for soil samples submitted under Case 7732. Previously submitted data were not labelled as re-extracts. The reason for re-extraction is outlined in the attached narrative.

We apologize for any inconvenience caused by the omission.

Sincerely,

Joanna M. Hall

Joanna M. Hall
Organic Section Manager
Chemistry Division

Approved by:

Neil M. Ram, Ph.D.
Manager
Chemistry Division

Enclosure

cc: EMSL/LV
Region II

JH/11

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A TRC Company

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VOA Narrative Case 7732
3-720-016

Samples BK804, BK805, BK806, BK807, BK804MS, and BK804MSD were re-extracted with Method Blank 2 (QC2843) due to contamination found during the screening of the original soil method blank. The source of contamination has been identified and corrected.

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Pesticide/PCB Cross Reference

Date Standards Run	Column	Sample ID
8/19 - 21/87	SP2250/2401	MB1, BK939MS, BK939MSD, BK520, BK521, BK522, BK801
8/25 - 26/87	SP2250/2401	MB1, BK939MS, BK939MSD
8/28 - 30/87	SP2250/2401	MB1, MB2, BK806RE, BK807RE, BK805RE, BK804RE, BK939MS, BK939MSD, BK804MSRE, BK804MSDRE,
8/27 - 29/87	SP2100	MB2, BK804RE, BK805RE, BK806RE, BK807RE, BK804MSRE, BK804MSDRE

Dry Weight Case #7732
3-720-016

Sample ID	Alliance NO.	Percent Moisture	Wet Weight	Dry Weight
BK804RE	53578	2.2	29.0	28.36
BK805RE	53579	7.0	29.8	27.71
BK806RE	53580	4.1	30	28.77
BK807RE	53581	16.9	30.3	25.18
BK804MSRE	QC2844	2.2	30.0	29.34
BK804MSDRE	QC2845	2.2	30.0	29.34

$$\text{Calculation} = \frac{100 - \%\ \text{moisture}}{100} \times \text{Wet Weight} = \text{Dry Weight}$$

DR Review

STANDARD OPERATING PROCEDURE

Ref. 17

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Date:
Number: HW-4
Revision: ~~2~~ 2

Title: Attachment 1 - CLP Data Assessment Checklist (GC and GC/MS Analyses)

SURVEILLANCE AND MONITORING BRANCH REVIEW

Project Name/Site: Dayton T. Brown

Case Number: 7732

Type Investigation (Circle One): Remedial (Site) Other

Contract No.: 68-01-7145

Laboratory: Alliance

Sample Identification Numbers:

Aqueous: BK 939, BK 801, BK 518-522

Soil/Sediment: BK 804-807

Superfund Account No.: 8TFA02P9ZZ

Comments:

1987
S.A.M. BRANCH

Title: Attachment 2 - CLP Data Assessment Checklist (GC and GC/MS Analysis) - [redacted] REVIEW
DR

[redacted] MONITORING MANAGEMENT BRANCH REVIEW

PART I: ~~Contractor and Preliminary Review~~

	YES	NO	N/A
1.0 Data Completeness and Deliverables			
1.1 Are any deliverables missing?	___	[✓]	___
1.2 Was SMO CCS checklist included with package?	[✓]	___	___

CONTRACTOR ACTION: If incomplete, list any missing data on the Missing Data Tracking Form (Attachment 5), and request missing information from laboratory by phone.

I. COVER LETTER/NARRATIVE

	YES	NO	N/A
2.0 Cover Letter/Case Narrative			
2.1 Is the Narrative or Cover Letter present?	[✓]	___	___
2.2 Are the following items contained in the Narrative or Cover Letter:			
a. Case Number and/or SAS Number	[✓]	___	___
b. Contract Number	[✓]	___	___

II. QC SUMMARY

	YES	NO	N/A
3.0 Surrogate Percent Recovery Summaries (Form II)			
3.1 Are the Surrogate Percent Recovery Summaries present for each of the following matrix:			
a. Water	[✓]	___	___
b. Soil	[✓]	___	___
3.2 Are all the samples listed on the Surrogate Percent Recovery Summaries for each of the following matrix:			
a. Water	[✓]	___	___
b. Soil	[✓]	___	___

When two or more surrogates for the blank are below contract QC requirements red-line all positive values, but not detection limits, for the associated samples, if sample surrogates are within or above QC limits; but if two or more sample surrogates are below contract QC limits, red-lined all sample data (Detection limits and positive data).

When two or more surrogates for the blank exceed contract QC requirements, validate sample data considering sample surrogate recoveries alone.

	YES	NO	N/A
3.6 Was one or more VOA surrogates outside of contract specifications for any samples?	___	[ ]	___
Blanks?	___	[ ]	___
If yes, were samples reanalyzed?	[ ]	___	✓
Were blanks reanalyzed?	[ ]	___	✓

MMB ACTION: If initial analysis and reanalysis both have one or more surrogate recoveries below contract QC requirements red-line all detection limits (u's) and flag all positive values (hits) with a J.

If initial analysis and reanalysis both have one or more surrogate recoveries above contract QC requirements do not red-line detection limits but flag all positive values with a J.

When one or more surrogate recoveries for the blank are below contract QC requirements red-line all positive values but not the detection limits for the associated samples if sample surrogates are within or above contract QC limits; but if one or more sample surrogate recoveries are below QC limits red-line all data (Detection limits and positive values).

When one or more surrogate recoveries for the blank exceed contract requirement validate data for the associated samples considering sample surrogate recoveries alone.

3.7 Was pesticides/PCB surrogate outside of contract specifications for any samples?	___	[ ]	___
Method Blanks?	___	[ ]	___

MMB ACTION: If recoveries are below contract requirement flag all associated positive results with a J and red-line all detection limits. If the recoveries are above contract requirement do not red-line the detection limits but flag all positive value with a J. However professional judgement should be used to determine whether a high bias exists due to coeluting interferences.

	YES	NO	N/A
5.0 Blanks			
5.1 Is the Reagent Blank Summary present? (Form IV)	[✓]	___	___
5.2 Frequency of Analysis: for the analysis of VOA HSL compounds, has an reagent/method blank been analyzed for each set of samples or every 20 samples of similar matrix (e.g. - water, low soil, medium soil, etc.), whichever is more frequent?	[___]	___	___
5.3 For VOA's, has an instrument blank been analyzed at least once every 12 hours for each GC/MS system used?	[___]	___	___
5.4 For B/N/A's and Pesticides/PCB's, has a method blank been extracted and analyzed for each set of samples or every 20 samples of similar matrix and similar extraction technique?			
B/N/A's	[✓]	___	___
Pesticides/PCB's	[___]	___	___
5.5 Has the method blank for B/N/As and Pesticides/PCBs been run on the same GC/MS or GC system as the samples?	[___]	___	___
6.0 Contamination (Reagent Blank Summary - Form IV)			
6.1. Do any method/instrument/reagent blanks have positive results for: HSL +/or TIC			
VOA's?	___	[___]	___
B/N?	___	[___]	___
Acids?	___	[___]	___
Pesticides?	___	[___]	___
PCBs?	___	[___]	___
6.2 Do any field/trip blanks have positive results for: HLS and/or TIC			
VOA's?	___	[___]	___
B/N?	✓	[___]	___
Acids?	✓	[___]	___
Pesticides?	___	[✓]	___
PCBs?	___	[✓]	___

	YES	NO	N/A
CONTRACTOR ACTION: Prepare a list of the samples associated with each of the contaminated and/or missing method blanks (attach a separate sheet).	-		

MMB ACTION: For common ~~for~~ blank contaminants found (e.g., methylene chloride, acetone, toluene and 2-butanone), phthalate esters reject (red-line) all associated positive results present at less than 10 times the blank contaminant levels; for all other contaminants reject (red-line) when all associated positive results are present at less than 5 times the blank contaminant levels. Do not reject any values reported with a "U" (detection limit values).

III SAMPLE DATA

9.0 Are the Traffic Report Forms present for all samples? [v] ___ ___

CONTRACTOR ACTION: List missing Traffic Reports on Missing Data Tracking Form. (See 1.1)

10.0 Organic Analysis Data (FORM I)

10.1 Are the four (4) Organic Analysis Data Sheets (VOA, BNA, Pesticides and Tentatively Identified Compounds) with completed header information required on each page of Form I, present for each of the following.

a. Samples and/or fractions as appropriate [.] ___ ___

b. Matrix spikes and matrix spike duplicates [/] ___ ___

c. Blanks [.] ___ ___

CONTRACTOR ACTION: List Missing or incomplete Data Sheets on missing Data Tracking Form. (See 1.1)

10.2 Are the VOA/BNA Reconstructed Ion Chromatograms for each sample, the mass spectra for the identified compounds, and the Data System Printouts (Quant. list) included in the sample package for each of the following?

a. Samples and/or fractions as appropriate [v] ___ ___

b. Matrix spikes and matrix spike duplicates (Mass spectra not required) [ ] ___ ___

c. Blanks [ ] ___ ___

	YES	NO	N/A
10.3 Are the response factors shown in the Quant Lists?	[ ]		
CONTRACTOR ACTION: List Missing or incomplete Reconstructed Ion Chromatograms, mass spectra and Data System printouts on the Missing Data Tracking Form (See 1.1).			
10.4 Are the Tentatively Identified Compounds (Form I, Part B) present and include scan number and estimated concentration?	[ ]		
CONTRACTOR ACTION: List missing TICs, Form I on Missing Data Tracking Form (See 1.1).			
10.5 Are the lab generated standard mass spectra of the identified compounds for each sample present?			
a. Volatile standard spectra	[ ]		
b. Semi-volatile standard spectra	[ ]		
CONTRACTOR ACTION: List missing mass spectra on Missing Data Tracking Form (See 1.1).			
11.0 GC/MS Evaluation			
11.1 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following.			
a. Samples and/or fractions as appropriate	[ ]		
b. Blanks	[ ]		
CONTRACTOR ACTION: If no, list the missing numbers on the Missing Data Tracking Form (See 1.1)			
12.0 Holding Times			
12.1 Have any holding times from date of collection been exceeded for:			
a. Volatiles			
Aqueous: 10 days* from time the lab receives the sample with 24 hours allowed from time of collection to lab receipt.		[ ]	

	YES	NO	N/A
Soil/Sediment: 10 days from time the lab receives the sample with 24 hours allowed from time of collection to lab receipt. *14 days if preserved with HCl (pH<2).	___	[✓]	___
b. NVOA's and Pesticides/PCBs:			
Aqueous (5 days from time of lab receipt to extraction, 40 days after extraction)	___	[✓]	___
Soil/Sediment (10 days from time of lab receipt to extraction, 40 days after extraction)	___	[___]	___

Allow 24 hours from time of collection to lab receipt.

CONTRACTOR ACTION: List the samples and their respective fractions with exceedances below. (Attach additional sheets if necessary.)

Table of Holding Time Exceedances

Sample	Sample Matrix	Fraction(s)	(See Traffic Report) Date Sampled	Date Lab Received	(See Form I) Date Extracted	(See Form I & Form V) Date Analyzed
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

MMB ACTION: If these holding times are exceeded, red-line detection limits and flag all positive values with a J.

.0 Standards Data (GC/MS)

13.1 Are the Reconstructed Ion Chromatograms, Data System Printouts (Quant. list), and work sheet calculations present for the following:

a. Semi-volatiles (initial and continuing calibrations)	[✓]	___	___
b. Volatiles (initial and continuing calibrations)	[✓]	___	___

	YES	NO	N/A
13.2 Are the response factors also present in the Quan List?	[✓]	___	___

CONTRACTOR ACTION: List missing or incomplete RICs, Quant. lists and work sheet calculations on Missing Data Tracking Form (See 1.1).

15.4 Internal Standard Area Summary (Form VIII)

15.4.1 Are the internal standard summary sheets (Form VIII) present and complete with all the required information?

VOA	[___]	___	___
BNA	[___]	___	___

CONTRACTOR: List missing or incomplete summary sheets on missing tracking form (see 1.1).

15.4.2 Are the internal standard areas within the upper and lower limits for each sample and blank analyzed under a given continuing calibration?

VOA	[___]	___	✓
BNA	[___]	___	✓

CONTRACTOR: List all the outliers.

Sample #	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

MMB ACTION: Use professional judgement to determine effect on data. Acceptance or rejection should not be based solely on the internal standard areas but should be determined in conjunction with other QA/QC data.

Title: Attachment 1 - CLP Data Assessment Checklist (GC and GC/MS Analysis) Part I: ~~Contractor and Preliminary Review~~ DR [redacted] REVIEW

Date: Ref. 17
Number: D. HW-3 of 168
Revision: 2

	YES	NO	N/A
18.0 GC Evaluation (Form X-PEST)			
18.1 Pesticide/PCB Identification - Are retention times of standard and sample compounds within the calculated retention time windows for the:			
Quantitation Column?	[✓]		
Confirmation Column?	[ ]	✓	
CONTRACTOR ACTION: Circle all outliners in red.			
19.0 Package Copies			
19.1 Are all the xeroxing of readable quality?	[✓]		
CONTRACTOR ACTION: If not, list appropriate page numbers on Missing Data Tracking Form (See 1.1).			

[redacted] [redacted]

II QC SUMMARY RESULTS

3.0 Surrogate Spikes			
3.1 Were any transcription/calculation errors found between raw data and Surrogate Per Cent Recovery Form?	✓	[ ]	
MMB ACTION: Make any necessary corrections, and note errors under Conclusions.			
5.0 Blanks			
5.1 Chromatography - review the blank raw data - chromatograms, RICs, quan reports or data system printouts and spectra. Is chromatographic performance for each instrument acceptable for:			
VOA's?	[ ]		
B/N & Acids?	[✓]		
Pest/PCB's?	[✓]		

Title: Attachment 1 - CLP Data Assessment Checklist (GC and GC/MS Analysis) DR
PART II: MMB Review - [redacted] REVIEW

Date: Ref. 17
Number: P. 1 ~~HW-2~~ of 168
Revision: 2

	YES	NO	N/A
10.0 GC/MS Evaluation			
10.1 HSL Compounds			
10.1.1 Is the RRT of reported compounds within 0.06 RRT units of the standard RRT?	[✓]		
10.1.2 Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]		
10.1.3 Are all ions present in the sample, but not present in the standard accounted for?	[✓]		
10.1.4 Do relative intensities specified above agree within 20% between the sample and standard spectra?	[✓]		
MMB ACTION: Use professional judgment to determine acceptability of data: if it is determined that incorrect ID's were made, all such data should be red-lined and changed to ~~an estimated (J), quantitation~~ appropriate detection limit. Ions greater than 10% in the sample spectrum but not present in the standard spectrum must be considered and accounted for.			
10.1.5 Check at least 2 of all positive values. Were any errors found in: Transcriptions?		[✓]	
Calculations?		[✓]	
MMB ACTION: Make any necessary corrections and note errors under Conclusions.			
10.2 Tentative ID - Non-HSL Compounds			
10.2.1 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% present in the sample mass spectrum?	[✓]		
10.2.2 Do relative intensities specified above agree within 20% between the sample and reference spectra?	[✓]		
10.2.3 Are molecular ions present in reference spectrum present in sample spectrum?	[✓]		

	YES	NO	N/A
10.2.4 Are all non-HSL compounds classified as tentatively identified reported with estimated quantitation and detection limits?	[✓]		

MMB ACTION: Use professional judgment to determine acceptability of data. If data is considered to be unacceptable, the tentative ID should be changed to "unknown".

11.0 Holding Times

	YES	NO	N/A
11.1 Have all associated sample data which have exceeded holding times been red-lined on the data sheet (including detection limits) indicating rejection?	[✓]		

MMB ACTION: Make any necessary corrections.

12.0 GC Evaluation

	YES	NO	N/A
12.1 Do chromatograms and data system printouts confirm retention times, retention time windows, and reported values (Forms IX-PEST 1 and X-PEST 2)?	[ ]	✓	
12.2 Do positive identifications have proper dissimilar column analysis?	[ ]	✓	
12.3 Are retention times of standard and sample compounds within the calculated retention times windows for the:			
Quantitation Column?	[✓]		
Confirmation Column?	[ ]	✓	
12.4 If concentration is sufficient, is GC/MS confirmation provided? ^ (>10 µg/ml in the extract)	[ ]		✓

MMB ACTION: Reject (red-line) all positive results (meeting quantitation column criteria, but missing confirmation by a second column or GC/MS (if appropriate). Also reject (red-line) all positive results not meeting retention time windows unless associated standard compounds are similarly biased.

	YES	NO	N/A
12.5 Check 10% of all positive values. Were any errors found in:			
Transcriptions?	✓	[ ]	
Calculations?		[✓]	

MMB ACTION: Make any necessary corrections and note errors under Conclusions.

III SAMPLE DATA PACKAGE

8.0 Traffic Report

	YES	NO	N/A
8.1 Do the Traffic Reports indicate any problems with sample receipt, condition of samples or special notations affecting the quality of the data?		[✓]	

MMB ACTION: Use professional judgment in evaluating any effect on the quality of the data.

Title: Attachment 2 - CLP Data Assessment Checklist
(GC and GC/MS Analysis) DR
PART II: MMB Review - [redacted] REVIEW

CASE # 7732 LAB Alliance SITE Dayton-T. Brown

19.0 Conclusions: (NOTE: Reviewers must red-line unacceptable data on sample data (FORM I) sheets; red-line data does not imply the compound is not present). Only the MMB reviewer has the authority to red-line unacceptable data. The letter J indicates an estimated value. In addition to the two definitions stated in the contract it also implies that the analyte is present but the quantitative value contains an unspecified degree of error. If an accurate quantity is desired, resampling ~~/analysis~~ and reanalysis is recommended.

19.1 Data Assessment

19.2 Contract Problems/Non-compliance Bis (2-ethylhexyl) Phthalate was detected, but not listed on form II in method blank

Reviewer's Signature: Donald H. Wright Date: 12/8/87

Verified By: [illegible] Date: 12/8/87

Method blanks measure laboratory contamination. Method blank contamination can be caused by dirty glass ware, impure solvents, etc. In order to be valid the concentration of an analyte in a sample must be at least 5 or 10 times (depending on analyte) the concentration of that in the method blank.

The following samples had bis(2-ethylhexyl)phthalate red-lined (rejected) for method blank contamination: BK520(BNA), BK521(BNA), BK939(BNA)

The following samples had hexanedioic acid, dioctyl ester red-lined (rejected) for method blank contamination: BK939(BNA), BK 521(BNA).

Rinse blanks consist of washings from sampling equipment. Rinse Blank contamination is caused by contamination of sampling equipment in the field. In order to be valid, the concentration of an analyte in a sample must be at least 5 or 10 times (depending on the analyte) the concentration of that analyte in the rinse blank.

The following samples had hexanedioic acid, dioctyl ester red-lined for rinse blank contamination: BK806(BNA).

The following samples had bis(2-ethylhexyl)phthalate red-lined for rinse blank contamination: BK805(BNA), BK806(BNA).

The amounts of analytes in a sample change with time. If specified holding times are exceeded, the data may not be accurate.

The following sample fractions were red-lined for holding time: BK804RE(Pest/PCB), BK805RE(Pest/PCB), BK806RE(Pest/PCB), BK807RE(Pest/PCB).

In order for a pesticide gas chromatographic identification to be valid, the appropriate peak must be present within the calculated retention time window for two different columns. If either peak is outside the retention time window for its respective column, the identification is not valid.

The following samples had aroclor 1260 red-lined because the gas chromatograph peak in one column was outside the calculated retention time window: BK804RE(Pest/PCB).

In order for a BNA compound to be identified and quantified, the gas chromatograph must show a peak and it must have a mass spectrograph which can be compared to a reference.

The following samples had 3-nitroaniline red-lined because it was not present: BK805.

When two or more surrogates for the blank are below contract QC requirements red-line all positive values, but not detection limits, for the associated samples, if sample surrogates are within or above QC limits; but if two or more sample surrogates are below contract QC limits, red-lined all sample data (Detection limits and positive data).

When two or more surrogates for the blank exceed contract QC requirements, validate sample data considering sample surrogate recoveries alone.

	YES	NO	N/A
3.6 Was one or more VOA surrogates outside of contract specifications for any samples?	___	[✓]	___
Blanks?	___	[✓]	___
If yes, were samples reanalyzed?	[___]	___	✓
Were blanks reanalyzed?	[___]	___	✓

MMB ACTION: If initial analysis and reanalysis both have one or more surrogate recoveries below contract QC requirements red-line all detection limits (u's) and flag all positive values (hits) with a J.

If initial analysis and reanalysis both have one or more surrogate recoveries above contract QC requirements do not red-line detection limits but flag all positive values with a J.

When one or more surrogate recoveries for the blank are below contract QC requirements red-line all positive values but not the detection limits for the associated samples if sample surrogates are within or above contract QC limits; but if one or more sample surrogate recoveries are below QC limits red-line all data (Detection limits and positive values).

When one or more surrogate recoveries for the blank exceed contract requirement validate data for the associated samples considering sample surrogate recoveries alone.

3.7 Was pesticides/PCB surrogate outside of contract specifications for any samples?	___	[✓]	___
Method Blanks?	___	[✓]	___

MMB ACTION: If recoveries are below contract requirement flag all associated positive results with a J and red-line all detection limits. If the recoveries are above contract requirement do not red-line the detection limits but flag all positive value with a J. However professional judgement should be used to determine whether a high bias exists due to coeluting interferences.

Sample Number
BK804

Ref. 17
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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: [illegible] Technologies Corp.
Lab Sample ID No: 53568
Sample Matrix: Soil
Data Release Authorized By: A. Doome

Case No: 7732
GC Report No: 7732
Contract No: 68-01-7145
Date Sample Received: 7/29/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: N/A
Date Analyzed: 8/5/87
Conc/Dil Factor: 5grams pH 7.4
Percent Moisture: (Not Decanted) 2.2

CAS Number		ug/l or (ug/Kg) (Circle One)
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	↓
75-01-4	Vinyl Chloride	↓
75-00-3	Chloroethane	↓
75-09-2	Methylene Chloride	13
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	↓
75-34-3	1,1-Dichloroethane	↓
156-60-5	Trans-1,2-Dichloroethene	↓
67-66-3	Chloroform	↓
107-06-2	1,2-Dichloroethane	↓
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

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

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 each flag 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 action. (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 indicated 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). 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 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

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK 804

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 2.00

Percent Moisture (Decanted) 2.2

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	590J
111-44-4	bis(-2-Chloroethyl)Ether	650u
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	77J
621-64-7	N-Nitroso-Di-n-Propylamine	650u
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	360J
88-75-5	2-Nitrophenol	650u
105-67-9	2, 4-Dimethylphenol	650u
65-85-0	Benzoic Acid	570J
111-91-1	bis(-2-Chloroethoxy)Methane	650u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	130J
106-47-8	4-Chloroaniline	650u
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	150J
77-47-4	Hexachlorocyclopentadiene	650u
88-06-2	2, 4, 6-Trichlorophenol	650u
95-95-4	2, 4, 5-Trichlorophenol	3300u
91-58-7	2-Chloronaphthalene	650u
88-74-4	2-Nitroaniline	3300u
131-11-3	Dimethyl Phthalate	650u
208-96-8	Acenaphthylene	650u
99-09-2	3-Nitroaniline	3300u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	650u
51-28-5	2, 4-Dinitrophenol	3300u
100-02-7	4-Nitrophenol	3300u
132-64-9	Dibenzofuran	650u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	3300u
534-52-1	4, 6-Dinitro-2-Methylphenol	3300u
86-30-6	N-Nitrosodiphenylamine (1)	650u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	3300u
85-01-8	Phenanthrene	650u
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	1300u
56-55-3	Benzo(a)Anthracene	650u
117-81-7	bis(2-Ethylhexyl)Phthalate	2300
218-01-9	Chrysene	650u
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name Alliance

Case No 7732

Sample Number BK80Y

Ref. 17 p. 122 of 168

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 8/27/87

Date Analyzed: 8/29/87

Conc/Dil Factor: 5

Percent Moisture (decanted) 2.2

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	28u
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	28u
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	28u
60-57-1	Dieldrin	56u
72-55-9	4,4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4,4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4,4'-DDT	56u
72-43-5	Methoxychlor	280u
53494-70-5	Endrin Ketone	56u
57-74-9	Chlordane	280u
8001-35-2	Toxaphene	560u
12674-11-2	Aroclor-1016	280u
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	560u
11096-82-5	Aroclor-1260	180J

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 29.0g V_t 1000 ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 804

Ref. 17
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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	–	~~FOUND~~ NO COMPOUNDS FOUND	–	–	–
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK804

Ref. 17
p. 124 of 168

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	AN Alky/Benzene	BNA	224	1000 J
2. —	Trimethy/Benzene isomer		232	1000 J
3. —	Unknown		248	1000 J
4. —	AN Alky/Benzene		263	3000 J
5. —	AN Alky/Benzene		297	1000 J
6. —	Unknown		404	600 J
7. —	Hydrocarbon		478	400 J
8. —	Hydrocarbon		646	500 J
9. —	Hydrocarbon		694	400 J
10. —	Hydrocarbon		722	300 J
11. —	Hydrocarbon		949	600 J
12. 57-10-3	Hexadecanoic acid		1021	700 J
13. 123-79-5	Hexanedioic acid, Dioctyl ester		1251	~~500 J~~ B
14. —	Unknown (only 1 match found)		1374	1000 J
15. —	Unknown (no match found)		1388	2000 J
16. —	Unknown (no match found)		1401	700 J
17. —	Hydrocarbon	✓	1590	500 J
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
BK805
Ref. 17
p. 125 of 168

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: [illegible] Technologies corp.
Case No: 7732
Lab Sample ID No: 53569
QC Report No: 7732
Sample Matrix: Soil
Contract No: 68-01-7145
Data Release Authorized By: A. Deane
Date Sample Received: 7/29/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 8/5/87
Conc/Dil Factor: 5 grams on 7.4
Percent Moisture: (Not Decanted) 7.0

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

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

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 each flag 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 action. (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 indicated 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). If limit of detection is 10 µg/l and a concentration of 3 µg/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 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

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK805

Ref. 17
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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/31/87

Date Analyzed: 9/2/87

Conc/Dil Factor: 2.00

Percent Moisture (Decanted) 7.0

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	610J
111-44-4	bis(-2-Chloroethyl)Ether	700u
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	↓
78-59-1	Isophorone	73J
88-75-5	2-Nitrophenol	700u
105-67-9	2, 4-Dimethylphenol	700u
65-85-0	Benzoic Acid	170J
111-91-1	bis(-2-Chloroethoxy)Methane	700u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	↓
91-57-6	2-Methylnaphthalene	40J
77-47-4	Hexachlorocyclopentadiene	700u
88-06-2	2, 4, 6-Trichlorophenol	700u
95-95-4	2, 4, 5-Trichlorophenol	3500u
91-58-7	2-Chloronaphthalene	700u
88-74-4	2-Nitroaniline	3500u
131-11-3	Dimethyl Phthalate	700u
208-96-8	Acenaphthylene	700u
99-09-2	3-Nitroaniline	3500u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	700u
51-28-5	2, 4-Dinitrophenol	3500u
100-02-7	4-Nitrophenol	3500u
132-64-9	Dibenzofuran	700u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	↓
100-01-6	4-Nitroaniline	3500u
534-52-1	4, 6-Dinitro-2-Methylphenol	3500u
86-30-6	N-Nitrosodiphenylamine (1)	700u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	↓
87-86-5	Pentachlorophenol	3500u
85-01-8	Phenanthrene	700u
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	↓
91-94-1	3, 3'-Dichlorobenzidine	1400u
56-55-3	Benzo(a)Anthracene	700u
117-81-7	bis(2-Ethylhexyl)Phthalate	~~1100~~
218-01-9	Chrysene	700u
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	↓

(1)-Cannot be separated from diphenylamine

Laboratory Name Alliance

Case No 7732

Sample Number BK805

Ref. 17
p. 127 of 168

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 8/27/87

Date Analyzed: 8/29/87

Conc/Dil Factor: 2

Percent Moisture (decanted) 7.0%

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	12u
319-85-7	Beta-BHC	12u
319-86-8	Delta-BHC	12u
58-89-9	Gamma-BHC (Lindane)	12u
76-44-8	Heptachlor	12u
309-00-2	Aldrin	12u
1024-57-3	Heptachlor Epoxide	12u
959-98-8	Endosulfan I	12u
60-57-1	Dieldrin	23u
72-55-9	4,4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4,4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4,4'-DDT	23u
72-43-5	Methoxychlor	120u
53494-70-5	Endrin Ketone	23u
57-74-9	Chlordane	120u
8001-35-2	Toxaphene	230u
12674-11-2	Aroclor-1016	120u
11104-28-2	Aroclor-1221	—
11141-16-5	Aroclor-1232	—
53469-21-9	Aroclor-1242	—
12672-29-6	Aroclor-1248	—
11097-69-1	Aroclor-1254	230u
11096-82-5	Aroclor-1260	100J

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 29.8g V_t 1000 ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 805

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p. 128 of 168

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
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Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK 805

Ref. 17
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Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	AN Alky/Benzene	BNA	223	2000J
2. —	AN Alky/Benzene		232	2000J
3. —	AN Alky/Benzene		246	2000J
4. —	Trimethy/Benzene isomer		263	7000J
5. —	AN Alky/Benzene		297	3000J
6. —	AN Alky/Benzene		359	500J
7. —	HYDROCARBON		470	500J
8. 26471-62-5	1,3-Diisocyanatomethy/Benzene		614	2000J
9. —	HYDROCARBON		631	400J
10. —	HYDROCARBON		705	1000J
11. —	UNKnown (only 1 MATCH FOUND)		1150	500J
12. —	UNKnown		1351	300J
13. —	UNKnown (NO MATCH FOUND)		1374	1000J
14. —	UNKnown (NO MATCH FOUND)		1387	2000J
15. —	UNKnown		1390	400J
16. —	UNKnown		1400	1000J
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Sample Number
BK806

Ref. 17
p. 130 of 168

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: [illegible] Technologies Corp.
Case No: 7732
Lab Sample ID No: 53570
QC Report No: 7732
Sample Matrix: So.
Contract No: 68-01-7145
Data Release Authorized By: A. Deme
Date Sample Received: 7/24/87

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 8/5/87
Conc/Dil Factor: 5grams ph 7.3
Percent Moisture: (Not Decanted) 4.1

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

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 each flag 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 action. (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 indicated 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). 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 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

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK806

Ref: 17
p. 131 of 168

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/31/87

Date Analyzed: 9/2/87

Conc/Dil Factor: 1.00

Percent Moisture (Decanted) 4.1

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	340u
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	1700u
111-91-1	bis(-2-Chloroethoxy)Methane	340u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	1700u
91-58-7	2-Chloronaphthalene	340u
88-74-4	2-Nitroaniline	1700u
131-11-3	Dimethyl Phthalate	340u
208-96-8	Acenaphthylene	340u
99-09-2	3-Nitroaniline	1700u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	340u
51-28-5	2, 4-Dinitrophenol	1700u
100-02-7	4-Nitrophenol	1700u
132-64-9	Dibenzofuran	340u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	1700u
534-52-1	4, 6-Dinitro-2-Methylphenol	1700u
86-30-6	N-Nitrosodiphenylamine (1)	340u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	1700u
85-01-8	Phenanthrene	340u
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	680u
56-55-3	Benzo(a)Anthracene	340u
117-81-7	bis(2-Ethylhexyl)Phthalate	~~280~~
218-01-9	Chrysene	340u
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name Alliance

Case No 7732

Sample Number BK806

Ref. 17 p. 132 of 168

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 8/27/87

Date Analyzed: 8/29/87

Conc/Dil Factor: 1

Percent Moisture (decanted) 4.1

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	~~8.0u~~
319-85-7	Beta-BHC	~~8.0u~~
319-86-8	Delta-BHC	~~8.0u~~
58-89-9	Gamma-BHC (Lindane)	~~8.0u~~
76-44-8	Heptachlor	~~8.0u~~
309-00-2	Aldrin	~~8.0u~~
1024-57-3	Heptachlor Epoxide	~~8.0u~~
959-98-8	Endosulfan I	~~8.0u~~
60-57-1	Dieldrin	~~16u~~
72-55-9	4,4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4,4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4,4'-DDT	~~16u~~
72-43-5	Methoxychlor	~~80u~~
53494-70-5	Endrin Ketone	~~16u~~
57-74-9	Chlordane	~~80u~~
8001-35-2	Toxaphene	~~160u~~
12674-11-2	Aroclor-1016	~~80u~~
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	~~160u~~
11096-82-5	Aroclor-1260	~~160u~~

Dilution 10 9/7/87

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 30g V_t 1000 ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 806

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Ref. 17
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Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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29.					
30.					

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK806

Ref. 17
p. 134 of 168

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96-48-0	DIHYDRO-2(3H)-FURANONE	BNA	159	500J
2. —	UNKNOWN (ONLY 1 MATCH FOUND)	↓	315	400J
3. 123-79-5	HEXANEDIOIC ACID, DIOCTYL ESTER	↓	1250	~~1000J~~ B
4.				
5.				
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30.				

Sample Number
BK807

Ref. 17
p. 135 of 168

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: [illegible] Technologies corp.
Case No: 7732
Lab Sample ID No: 53571
QC Report No: 7732
Sample Matrix: Soil
Contract No: 68-01-7145
Data Release Authorized By: A. Deane
Date Sample Received: 7/29/87

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 8/5/87
Conc/Dil Factor: 5grams pH 7.2
Percent Moisture: (Not Decanted) 16.9

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	12U
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	18
67-64-1	Acetone	~~10~~ 12U
75-15-0	Carbon Disulfide	6U
75-35-4	1,1-Dichloroethene	
75-34-3	1,1-Dichloroethane	
156-60-5	Trans-1,2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1,2-Dichloroethane	
78-93-3	2-Butanone	12U
71-55-6	1,1,1-Trichloroethane	6U
56-23-5	Carbon Tetrachloride	6U
108-05-4	Vinyl Acetate	12U
75-27-4	Bromodichloromethane	6U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	6U
10061-02-6	Trans-1,3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1,1,2-Trichloroethane	
71-43-2	Benzene	
10061-01-5	cis-1,3-Dichloropropene	
110-75-8	2-Chloroethylvinylether	12U
75-25-2	Bromoform	6U
108-10-1	4-Methyl-2-Pentanone	12U
591-78-6	2-Hexanone	12U
127-18-4	Tetrachloroethene	6U
79-34-5	1,1,2,2-Tetrachloroethane	
108-88-3	Toluene	
108-90-7	Chlorobenzene	
100-41-4	Ethylbenzene	
100-42-5	Styrene	
	Total Xylenes	

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 each flag 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 action. (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 indicated 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). If limit of detection is 10 µg/l and a concentration of 3 µg/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 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

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK807

Ref. 17 p. 136 of 168

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/31/87

Date Analyzed: 9/2/87

Conc/Dil Factor: 1.00

Percent Moisture (Decanted) 16.9

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	360u
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1, 3-Dichlorobenzene	
106-46-7	1, 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1, 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2, 4-Dimethylphenol	
65-85-0	Benzoic Acid	1800u
111-91-1	bis(-2-Chloroethoxy)Methane	360u
120-83-2	2, 4-Dichlorophenol	
120-82-1	1, 2, 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2, 4, 6-Trichlorophenol	
95-95-4	2, 4, 5-Trichlorophenol	1800u
91-58-7	2-Chloronaphthalene	360u
88-74-4	2-Nitroaniline	1800u
131-11-3	Dimethyl Phthalate	360u
208-96-8	Acenaphthylene	360u
99-09-2	3-Nitroaniline	1800u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	360u
51-28-5	2, 4-Dinitrophenol	1800u
100-02-7	4-Nitrophenol	1800u
132-64-9	Dibenzofuran	360u
121-14-2	2, 4-Dinitrotoluene	
606-20-2	2, 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	1800u
534-52-1	4, 6-Dinitro-2-Methylphenol	1800u
86-30-6	N-Nitrosodiphenylamine (1)	360u
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	1800u
85-01-8	Phenanthrene	360u
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3, 3'-Dichlorobenzidine	730u
56-55-3	Benzo(a)Anthracene	360u
117-81-7	bis(2-Ethylhexyl)Phthalate	
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1, 2, 3-cd)Pyrene	
53-70-3	Dibenz(a, h)Anthracene	
191-24-2	Benzo(g, h, i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name Alliance

Case No 7732

Sample Number BK807

Ref 17
P 137 of 168

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 8/27/87

Date Analyzed: 8/29/87

Conc/Dil Factor: 1

Percent Moisture (decanted) 16.9

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	~~8.0u~~
319-85-7	Beta-BHC	~~8.0u~~
319-86-8	Delta-BHC	~~8.0u~~
58-89-9	Gamma-BHC (Lindane)	~~8.0u~~
76-44-8	Heptachlor	~~NA~~
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	—
72-20-8	Endrin	—
33213-65-9	Endosulfan II	—
72-54-8	4,4'-DDD	—
1031-07-8	Endosulfan Sulfate	—
50-29-3	4,4'-DDT	~~16u~~
72-43-5	Methoxychlor	~~80u~~
53494-70-5	Endrin Ketone	~~16u~~
57-74-9	Chlordane	80u
8001-35-2	Toxaphene	160u
12674-11-2	Aroclor-1016	80u
11104-28-2	Aroclor-1221	—
11141-16-5	Aroclor-1232	—
53469-21-9	Aroclor-1242	—
12672-29-6	Aroclor-1248	—
11097-69-1	Aroclor-1254	160u
11096-82-5	Aroclor-1260	~~160u~~

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 30.3g V_t 1000 ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 807

Ref. 17
p. 138 of 168

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Laboratory Name: ALLIANCE Technologies Corp.

Case No: 7732

Sample Number: BK807

Ref. 17
p. 139 of 168

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 96-48-0	Dihydro-2(3H)-furanone	BNA	159	500J
2. —	UNKnown (only 1 match found)	↓	207	400J
3. —	UNKnown (only 1 match found)	↓	316	500J
4. —	UNKnown (only 1 match found)	↓	595	500J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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13.				
14.				
15.				
16.				
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18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Sample Number
BK 939

Ref. 17
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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >B0970::L2 53572
Sample Matrix: Water
Data release Authorized by: A. Deane

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/06/87 21:15
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	10.	U	71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	10.	U	79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	4.2	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 939

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ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 07/31/87
Date Analyzed: 8/31/87 21:54
Conc/Dil Factor: 2.00000
Percent Moisture (Decanted) NA

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

C.A.S. Number		ug/L or ug/Kg (Circle One)	
108-95-2	Phenol	4.3	J
111-44-4	bis(-2-Chloroethyl)Ether	10.	U
95-57-8	2-Chlorophenol	10.	U
541-73-1	1,3-Dichlorobenzene	10.	U
106-46-7	1,4-Dichlorobenzene	10.	U
100-51-6	Benzyl Alcohol	10.	U
95-50-1	1,2-Dichlorobenzene	10.	U
95-48-7	2-Methylphenol	10.	U
39638-32-9	bis(2-chloroisopropyl)Ether	10.	U
106-44-5	4-Methylphenol	10.	U
621-64-7	N-Nitroso-Di-n-Propylamine	10.	U
67-72-1	Hexachloroethane	10.	U
98-95-3	Nitrobenzene	10.	U
78-59-1	Isophorone	10.	U
88-75-5	2-Nitrophenol	10.	U
105-67-9	2,4-Dimethylphenol	10.	U
65-85-0	Benzoic Acid	50.	U
111-91-1	bis(-2-Chloroethoxy)Methane	10.	U
120-83-2	2,4-Dichlorophenol	10.	U
120-82-1	1,2,4-Trichlorobenzene	10.	U
91-20-3	Naphthalene	10.	U
106-47-8	4-Chloroaniline	10.	U
87-68-3	Hexachlorobutadiene	10.	U
59-50-7	4-Chloro-3-Methylphenol	10.	U
91-57-6	2-Methylnaphthalene	10.	U
77-47-4	Hexachlorocyclopentadiene	10.	U
88-06-2	2,4,6-Trichlorophenol	10.	U
95-95-4	2,4,5-Trichlorophenol	50.	U
91-58-7	2-Chloronaphthalene	10.	U
88-74-4	2-Nitroaniline	50.	U
131-11-3	Dimethyl Phthalate	10.	U
208-96-8	Acenaphthylene	10.	U
99-09-2	3-Nitroaniline	50.	U

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	10.0	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrososdiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~141.~~	
218-01-9	Chrysene	10.	U
117-84-0	Di-n-Octyl Phthalate	9.	J
205-99-2	Benzo(b)Fluoranthene	10.	U
207-08-9	Benzo(k)Fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U

(1)-Cannot be separated from diphenylamine

Laboratory Name Alliance

Case No ~~7784~~ 7732

Sample Number BK939

Ref. 17 p 142 of 168

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/30/87

Date Analyzed: 8/20/87

Conc/Dil Factor: 5

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.25u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	0.25u
60-57-1	Dieldrin	0.5u
72-55-9	4,4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4,4'-DDD	↓
1031-07-8	Endosulfan Sulfate	0.5u
50-29-3	4,4'-DDT	0.5u
72-43-5	Methoxychlor	1.0u
53494-70-5	Endrin Ketone	0.5u
57-74-9	Chlordane	1.0u
8001-35-2	Toxaphene	2.0u
12674-11-2	Aroclor-1016	1.0u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	2.0u
11096-82-5	Aroclor-1260	2.0u

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 1000ml or W_s — V_t 10000ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 939

Ref. 17
p. 143 of 168

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 939

ORGANICS ANALYSIS DATA SHEET
(Page 4)

Ref. 17
p. 144 of 168

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.	123-79-5	Hexanedioic acid, dioctylester	BNA	1255	~~500 J~~
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Sample Number
BK 801

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >B0969::L2 53567
Sample Matrix: Water
Data release Authorized by: A. Demse

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

P. 14

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/06/87 20:28
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	3.	J
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	10.	U	71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	10.	U	79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	3.1	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 801

Ref. 17
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ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 07/31/87
Date Analyzed: 8/31/87 20:25
Conc/Dil Factor: 2.00000
Percent Moisture (Decanted) NA

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

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

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

(1)-Cannot be separated from diphenylamine

Ref. 17
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Laboratory Name Alliance
Case No 7732

Sample Number
BK801

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 7/30/87
Date Analyzed: 8/20/87
Conc/Dil Factor: 1
Percent Moisture (decanted) –

GPC Cleanup ☐Yes ☒No
Separatory Funnel Extraction ☒Yes
Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	↓
58-89-9	Gamma-BHC (Lindane)	↓
76-44-8	Heptachlor	↓
309-00-2	Aldrin	↓
1024-57-3	Heptachlor Epoxide	↓
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	↓
72-20-8	Endrin	↓
33213-65-9	Endosulfan II	↓
72-54-8	4,4'-DDD	↓
1031-07-8	Endosulfan Sulfate	↓
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.50u
8001-35-2	Toxaphene	10u
12674-11-2	Aroclor-1016	0.50u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	↓
53469-21-9	Aroclor-1242	↓
12672-29-6	Aroclor-1248	↓
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

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 1000ml or W_s – V_t 10000ml V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK B01

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 801

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	—	NO COMPOUNDS FOUND	BNA	—	—
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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17.					
18.					
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21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Sample Number
BK 518

Ref. 17
p. 150 of 168

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >80949::L2 53562
Sample Matrix: WATER
Data release Authorized by: A. Deane

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/05/87 17:54
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/L or ug/Kg (Circle One)		C.A.S. Number		ug/L or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	10.	U	71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	10.	U	79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	5.0	U
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 518

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

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Sample Number
BK 519

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >B0950::L2 53563
Sample Matrix: WATER
Data release Authorized by: A. Deane

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/05/87 18:42
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	10.	U	71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	10.	U	79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	1.6	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 519

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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27.					
28.					
29.					
30.					

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Sample Number
BK 520

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >B0951::L2 53564
Sample Matrix: WATER
Data release Authorized by: A. Deome

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/05/87 19:29
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/L or ug/Kg (Circle One)		C.A.S. Number		ug/L or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	44.		71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2 Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	24.		79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	2.1	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 520

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ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 07/31/87
Date Analyzed: 8/31/87 18:09
Conc/Dil Factor: 2.00000
Percent Moisture (Decanted) NA

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

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

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-Methylphenol	50.	U
86-30-6	N-Nitrososdiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	~~1.~~ J	10U
129-00-0	Pyrene	~~1.~~ J	10U
85-68-7	Butylbenzylphthalate	~~1.~~ J	10U
91-94-1	3,3'-Dichlorobenzidine	~~85.~~	20U
56-55-3	Benzo(a)Anthracene	~~2.~~ J	10U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~104.~~	
218-01-9	Chrysene	~~2.~~ J	10U
117-84-0	Di-n-Octyl Phthalate	11.	
205-99-2	Benzo(b)Fluoranthene	~~2.~~ J	10U
207-08-9	Benzo(k)Fluoranthene	~~3.~~ J	10U
50-32-8	Benzo(a)Pyrene	3.	J
193-39-5	Indeno(1,2,3-cd)Pyrene	3.	J
53-70-3	Dibenzo(a,h)Anthracene	~~3.~~ J	10U
191-24-2	Benzo(g,h,i)Perylene	~~3.~~ J	10U

(1)-Cannot be separated from diphenylamine

Ref. 17
p. 156 of 168

Laboratory Name Alliance

Case No 7732

Sample Number
BK520

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/30/87

Date Analyzed: 8/21/87

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	↓
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4, 4'-DDE	↓
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4, 4'-DDD	—
1031-07-8	Endosulfan Sulfate	
50-29-3	4, 4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	~~0.5u~~ 0.5u
11104-28-2	Aroclor-1221	↓
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

9/3/87

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 ml or W_s _____ V_t 10000 ul V_i 5 ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 520

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 520

Ref. 17
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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.	–	UNKNOWN (ONLY 1 MATCH FOUND)	BNA	1397	10 J
2.	–	UNKNOWN (ONLY 1 MATCH FOUND)		1407	40 J
3.	–	UNKNOWN (NO MATCH FOUND)		1433	20 J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

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Sample Number
BK 521

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >B0952::L2 53565
Sample Matrix: WATER
Data release Authorized by: A. Deome

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/05/87 20:17
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	117.		71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	22.		79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	2.7	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 521

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ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 07/31/87
Date Analyzed: 8/31/87 18:55
Conc/Dil Factor: 2.00000
Percent Moisture (Decanted) NA

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

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

C.A.S. Number		ug/L or ug/Kg (Circle One)	
83-32-9	Acenaphthene	10.	U
51-28-5	2,4-Dinitrophenol	50.	U
100-02-7	4-Nitrophenol	50.	U
132-64-9	Dibenzofuran	10.	U
121-14-2	2,4-Dinitrotoluene	10.	U
606-20-2	2,6-Dinitrotoluene	10.	U
84-66-2	Diethylphthalate	10.	U
7005-72-3	4-Chlorophenyl-phenylether	10.	U
86-73-7	Fluorene	10.	U
100-01-6	4-Nitroaniline	50.	U
534-52-1	4,6-Dinitro-2-Methylphenol	50.	U
86-30-6	N-Nitrososdiphenylamine (1)	10.	U
101-55-3	4-Bromophenyl-phenylether	10.	U
118-74-1	Hexachlorobenzene	10.	U
87-86-5	Pentachlorophenol	50.	U
85-01-8	Phenanthrene	10.	U
120-12-7	Anthracene	10.	U
84-74-2	Di-n-Butylphthalate	10.	U
206-44-0	Fluoranthene	10.	U
129-00-0	Pyrene	10.	U
85-68-7	Butylbenzylphthalate	10.	U
91-94-1	3,3'-Dichlorobenzidine	20.	U
56-55-3	Benzo(a)Anthracene	10.	U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~13.~~	
218-01-9	Chrysene	10.	U
117-84-0	Di-n-Octyl Phthalate	10.	U
205-99-2	Benzo(b)Fluoranthene	10.	U
207-08-9	Benzo(k)Fluoranthene	10.	U
50-32-8	Benzo(a)Pyrene	10.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10.	U
53-70-3	Dibenzo(a,h)Anthracene	10.	U
191-24-2	Benzo(g,h,i)Perylene	10.	U 30

(1)-Cannot be separated from diphenylamine

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Laboratory Name Alliance

Case No 7732

Sample Number
BK521

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 7/30/87

Date Analyzed: 8/20/87

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		(ug/l) or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4,4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

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 1000ml or W_s — V_t 10000ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 521

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		No Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 521

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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	123-79-5	Hexanedioic Acid, Dioctyl ester (only 2 max)	BNA	1253	~~205~~ 12
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Ref. 17
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Sample Number
BK 522

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Alliance Tech. Corp.
Lab Sample ID: >80953::L2 53566
Sample Matrix: WATER
Data release Authorized by: A. Deane

Case No.: 7732
QC Report No.: 7732
Contract No.: 68-01-7145
Date Sample Received: 07/29/87

Volatile Compounds
Concentration: Low Medium (Circle One)
Date Extracted: N/A
Date Analyzed: 8/05/87 21:04
Conc/Dil factor: 1.0 pH : 0.0
Percent Moisture: (Not Decanted) 00.0

C.A.S. Number		ug/l or ug/Kg (Circle One)		C.A.S. Number		ug/l or ug/Kg (Circle One)	
74-87-3	Chloromethane	10.	U	78-87-5	1,2-Dichloropropane	5.	U
74-83-9	Bromomethane	10.	U	10061-02-6	Trans-1,3-Dichloropropene	5.	U
75-01-4	Vinyl Chloride	10.	U	79-01-6	Trichloroethene	5.	U
75-00-3	Chloroethane	10.	U	124-48-1	Dibromochloromethane	5.	U
75-09-2	Methylene Chloride	5.0	U	79-00-5	1,1,2-Trichloroethane	5.0	U
67-64-1	Acetone	53.		71-43-2	Benzene	5.	U
75-15-0	Carbon Disulfide	5.0	U	10061-01-5	cis-1,3-Dichloropropene	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U	110-75-8	2-Chloroethylvinylether	10.0	U
75-34-3	1,1-Dichloroethane	5.0	U	75-25-2	Bromoform	5.0	U
156-60-5	Trans-1,2-Dichloroethene	5.0	U	108-10-1	4-Methyl-2-Pentanone	10.0	U
67-66-3	Chloroform	5.0	U	591-78-6	2-Hexanone	10.0	U
107-02-2	1,2-Dichloroethane	5.0	U	127-18-4	Tetrachloroethene	5.0	U
78-93-3	2-Butanone	30.		79-34-5	1,1,2,2-Tetrachloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.0	U	108-88-3	Toluene	4.1	J
56-23-6	Carbon Tetrachloride	5.0	U	108-90-7	Chlorobenzene	5.0	U
108-05-4	Vinyl Acetate	10.	U	100-41-4	Ethylbenzene	5.	U
75-27-4	Bromodichloromethane	5.0	U	100-42-5	Styrene	5.0	U
					Total Xylenes	5.0	U

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 each flag 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 action (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 indicated the presence of a compound that meets the identification criteria but the result is < than the specified detection limit but > than zero (e.g. 10J). If limit of detection is 10 ug/L and a conentration of 3.0 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 blank contamination and warns data the 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

OPTIONAL FLAGS

N - Compound not present in Calibration File.

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 522

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ORGANICS ANALYSIS DATA SHEET
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted: 07/31/87
Date Analyzed: 8/31/87 19:40
Conc/Dil Factor: 2.00000
Percent Moisture (Decanted) NA

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

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

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

(1)-Cannot be separated from diphenylamine

Ref. 17
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Laboratory Name Alliance

Case No 7732

Sample Number
BK522

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/30/87

Date Analyzed: 8/20/87

Conc/Dil Factor: 1

Percent Moisture (decanted) –

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	~~0.05u~~
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4, 4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4, 4'-DDD	
1031-07-8	Endosulfan Sulfate	
50-29-3	4, 4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

[illegible] 9/3/87

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 1000ml or W_s – V_t 10000ul V_i 5ul

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 522

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Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/L or ug/kg)
1.		NO Compounds Found	VOA		
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Lab Name : Alliance Tech. Corp.
Case No : 7732

Sample Number
BK 522

Ref. 17
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ORGANICS ANALYSIS DATA SHEET
(Page 4)

Tentatively Identified Compounds

	C.A.S. Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	–	NO COMPOUNDS FOUND	BNA	—	—
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					