204202

02-9004-38-SI
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
VOLUME 2 OF 2

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-9004-38
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 17, 1990

NUS CORPORATION
SUPERFUND DIVISION

REFERENCE NO. 5

SURFACE WATER QUALITY STANDARDS

N.J.A.C. 7:9–4.1 et seq.

May 1985

once-through basis for the duration of the test, in accordance with N.J.A.C. 7:18.

"Fresh water(s)" means all nontidal and tidal waters generally having a salinity, due to natural sources, of less than or equal to 3.5 parts per thousand at mean high tide.

"FW" means the general surface water classification applied to fresh waters.

"FW1" means those fresh waters that originate in and are wholly within Federal or State parks, forests, fish and wildlife lands, and other special holdings, that are to be maintained in their natural state of quality (set aside for posterity) and not subjected to any man-made wastewater discharges, as designated in Index A incorporated into this subchapter.

"FW2" means the general surface water classification applied to those fresh waters that are not designated as FW1 or Pinelands Waters.

"Heat dissipation area" means a mixing zone, as may be designated by the Department, into which thermal effluents may be discharged for the purpose of mixing, dispersing, or dissipating such effluents without creating nuisances, hazardous conditions, or violating the provisions of this subchapter.

"Hypolimnion" means the lower region of a stratified waterbody that extends from the thermocline to the bottom of the waterbody, and is isolated from circulation with the upper waters, thereby receiving little or no oxygen from the atmosphere.

"Important species" means species that are commercially valuable (e.g., within the top ten species landed, by dollar value); recreationally valuable; threatened or endangered; critical to the organization and/or maintenance of the ecosystem; or other species necessary in the food web for the well-being of the species identified in this definition.

"Industrial water supply" means water used for processing or cooling.

"Intermittent stream" means a stream with a MA7CD10 flow of less than one-tenth (0.1) cubic foot per second.

"Lake, pond, or reservoir" means any impoundment, whether naturally occurring or created in whole or in part by the building of structures for the retention of surface water, excluding sedimentation control and stormwater retention/detention basins.

"LC50" means the median lethal concentration of a toxic substance, expressed as a statistical estimate of the concentration that kills 50 percent of the test organisms under

characteristics, but are suitable for a wide variety of other fish species.

"NPDES" means National Pollutant Discharge Elimination System.

"NT" means nontrout waters.

"Nutrient" means a chemical element or compound, such as nitrogen or phosphorus, which is essential to and promotes the growth and development of organisms.

"Outstanding National Resource Waters" means high quality waters that constitute an outstanding national resource (for example, waters of National/State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance) as designated in Index G incorporated into this subchapter.

"Persistent" means relatively resistant to degradation, generally having a half life of over 96 hours.

"Pinelands waters" means all waters within the boundaries of the Pineland Area, except those waters designated as FW1 in this subchapter, as established in the Pinelands Protection Act N.J.S.A. 13:18A-1 et seq. and shown on Plate 1 of the "Comprehensive Management Plan" adopted by the New Jersey Pinelands Commission in November 1980.

"PL" means the general surface water classification applied to Pinelands Waters.

"Primary contact recreation" means recreational activities that involve significant ingestion risks and includes, but is not limited to, wading, swimming, diving, surfing, and water skiing.

"Public hearing" means a legislative type hearing before a representative or representatives of the Department providing the opportunity for public comment, but does not include cross-examination.

"River mile" means the distance, measured in statute miles, between two locations on a stream, with the first location designated as mile zero. Mile zero for the Delaware River is located at the intersection of the centerline of the navigation channel and a line between the Cape May Light, New Jersey, and the tip of Cape Henlopen, Delaware.

"Saline waters" means waters having salinities generally greater than 3.5 parts per thousand at mean high tide.

"SC" means the general surface water classification applied to coastal saline waters.

"SE" means the general surface water classification applied to saline waters of estuaries.

Surface Water Classifications

Surface Water Quality Standards
N.J.A.C. 7:9-4

Index D-
Surface Water Classifications of the Passaic, Hackensack and N.Y. Harbor Complex Basin

July 1985

State of New Jersey Department of Environmental Protection/Division of Water Resources

(c) In all FW2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Primary and secondary contact recreation;

3. Industrial and agricultural water supply;

4. Public potable water supply after such treatment as required by law or regulation; and

5. Any other reasonable uses.

(d) In all SE1 waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

2. Maintenance, migration and propagation of the natural and established biota;

3. Primary and secondary contact recreation; and

4. Any other reasonable uses.

(e) In all SE2 waters the designated uses are:

1. Maintenance, migration and propagation of the natural and established biota;

2. Migration of diadromous fish;

3. Maintenance of wildlife;

4. Secondary contact recreation; and

5. Any other reasonable uses.

(f) In all SE3 waters the designated uses are:

1. Secondary contact recreation;

2. Maintenance and migration of fish populations;

3. Migration of diadromous fish;

4. Maintenance of wildlife; and

5. Any other reasonable uses.

(g) In all SC waters the designated uses are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;

INDEX D - Surface Water Classifications of the Passaic, Hackensack and N.Y. Harbor Complex Basin

ARTHUR KILL	
(Perth Amboy) - The Kill and its saline New Jersey tributaries between the Outerbridge Crossing and a line connecting Ferry Pt., Perth Amboy to Wards Pt., Staten Island, N.Y.	SE2
(Elizabeth) - From an east-west line connecting Elizabethport with Bergen Pt., Bayonne to the Outerbridge Crossing	SE3
(Woodbridge) - All freshwater tributaries	FW2-NT
BEAR SWAMP BROOK (Mahwah) - Entire length	FW2-TP(C1)
BEAR SWAMP LAKE (Ringwood)	FW2-NT(C1)
BEAVER BROOK (Meriden) - Entire length	FW2-NT
BELCHER CREEK (W. Milford) - Entire length	FW2-NT
BERRYS CREEK (Secaucus) - Entire length	FW2-NT/SE2
BLACK BROOK	
(Meyersville) - Entire length, except segment described below	FW2-NT
(Great Swamp) - Segment and tributaries within the Great Swamp National Wildlife Refuge	FW2-NT(C1)
BLUE MINE BROOK	
(Wanaque) - Entire length, except segment described below	FW2-TM
(Norvin Green State Forest) - That portion of the stream and any tributaries within Norvin Green State Forest	FW2-TM(C1)
BRUSHWOOD POND (Ringwood)	FW2-NT(C1)
BUCKABEAR POND (Newfoundland) - Pond, its tributaries and connecting stream to Clinton Reservoir	FW2-NT(C1)
CANISTEAR RESERVOIR (Vernon)	FW2-TM
CANISTEAR RESERVOIR TRIBUTARY (Vernon) - The southern branch of the eastern tributary to the Reservoir	FW1
CANOE BROOK (Chatham) - Entire length	FW2-NT
CEDAR POND (Clinton) - Pond and all tributaries	FW1
CHARLOTTEBURG RESERVOIR (Charlotteburg)	FW2-TM
CHERRY RIDGE BROOK	
(Vernon) - Entire length, except segments described below	FW2-NT
(Canistear) - Brook and tributaries upstream of Canistear Reservoir located entirely within the boundaries of Wawayanda State Park and the Newark Watershed lands	FW1
CLINTON BROOK	
(Mossmans Brook) (W. Milford) - Source to, but not including, Clinton Reservoir	FW2-NT(C1)
(Newfoundland) - Clinton Reservoir dam to Pequannock River	FW2-TP(C1)
CLINTON RESERVOIR (W. Milford)	FW2-TM(C1)
CLOVE BROOK - See STAG BROOK	

COOLEY BROOK	
(W. Milford) - Entire length, except segments described below	FW2-TP(C1)
(Hewitt) - Segments of the brook and all tributaries located entirely within Hewitt State Forest	FW1 [tp]
CORYS BROOK (Warren) - Entire length	FW2-NT
CRESSKILL BROOK	
(Alpine) - Source to Duck Pond Rd. bridge, Demarest	FW2-TP(C1)
(Demarest) - Duck Pond Rd. bridge to Tenakill Brook	FW2-NT
CUPSAW BROOK	
(Skylands) - Source to Cupsaw Lake dam, except segment described below	FW2-NT
(Skylands) - That segment of Cupsaw Brook above the dam and within the boundaries of Ringwood State Park	FW2-NT(C1)
(Skylands) - Cupsaw Lake dam to mouth	FW2-TM
DEAD RIVER (Liberty Corners) - Entire length	FW2-NT
DEN BROOK (Denville) - Entire length	FW2-NT
DUCK POND (Ringwood)	FW2-NT(C1)
ELIZABETH RIVER	
(Elizabeth) - Source to Broad St. bridge, Elizabeth and all freshwater tributaries	FW2-NT
(Elizabeth) - Broad St. bridge to mouth	SE3
FOX BROOK (Mahwah) - Entire length	FW2-NT
GLASMERE POND (Ringwood)	FW2-NT(C1)
GOFFLE BROOK (Hawthorne) - Entire length	FW2-NT
GRANNIS BROOK (Morris Plains) - Entire length	FW2-NT
GREAT BROOK	
(Chatham) - Entire length, except segment described below	FW2-NT
(Great Swamp) - Segment within the boundaries of the Great Swamp National Wildlife Refuge	FW2-NT(C1)
GREEN BROOK	
(W. Milford) - Entire length, except those segments described below	FW2-TP(C1)
(Hewitt) - Those segments located entirely within the Hewitt State Forest boundaries	FW1 [tp]
GREEN POND (Rockaway)	FW2-TM
GREEN POND BROOK (Picatinny Arsenal) - Green Pond outlet to Rockaway River	FW2-NT
GREENWOOD LAKE (W. Milford)	FW2-TM
HACKENSACK RIVER	
(Oradell) - Source to Oradell dam	FW2-NT
(Oradell) - Main stem and saline tributaries from Oradell dam to the confluence with Overpeck Creek	SE1
(Little Ferry) - Main stem and saline tributaries from Overpeck Creek to confluence with Berrys Creek	SE2
(Secaucus) - Main stem from Berrys Creek to Route 1 & 9 crossing	SE2
(Kearny Point) - Main stem downstream from Route 1 & 9 crossing	SE3

TRIBUTARIES	
(Oradell) - Tributaries joining the main stem between Oradell dam and the confluence with Overpeck Creek	FW2-NT/SE1
(Little Ferry) - Tributaries joining the main stem downstream of Overpeck Creek	FW2-NT/SE2
HANKS POND (Clinton) - Pond and all tributaries	FW1
HARMONY BROOK (Brookside) - Entire length	FW2-TP(C1)
HARRISONS BROOK (Bernards) - Entire length	FW2-NT
HAVEMEYER BROOK (Mahwah) - Entire length	FW2-TP(C1)
HEWITT BROOK (W. Milford) - Entire length	FW2-TP(C1)
HIBERNIA BROOK	
(Hibernia) - Entire length, except tributary described separately below	FW2-TM
(Rockaway) - Entire length of tributary at Rockaway	FW2-TP(C1)
HIGH MOUNTAIN BROOK (Ringwood) - Source to, but not including, Skyline Lake	FW2-TP(C1)
HOHOKUS BROOK (Hohokus) - Entire length	FW2-NT/SE2
HUDSON RIVER	
(Rockleigh) - River and saline portions of New Jersey tributaries from the N.J.-N.Y. boundary line in the north to its confluence with the Harlem River, N.Y.	SE1
(Englewood Cliffs) - River and saline portions of New Jersey tributaries from the confluence with the Harlem River, N.Y. to a north-south line connecting Constable Hook (Bayonne) to St. George (Staten Island, N.Y.)	SE2
TRIBUTARIES	
(Rockleigh) - Freshwater portions of tributaries to the Hudson River in New Jersey	FW2-NT
INDIAN GROVE BROOK (Somersetin) - Entire length	FW2-TM
JACKSON BROOK	
(Mine Hill) - Source to the boundary of Hurd Park, Dover	FW2-TP(C1)
(Dover) - Hurd Park to Rockaway River	FW2-NT
JENNINGS CREEK (W. Milford) - State line to Wanaque River	FW2-TP(C1)
JERSEY CITY RESERVOIR (Boonton)	FW2-TM
KANOUSE BROOK (Newfoundland) - Entire length	FW2-TP(C1)
KIKEOUT BROOK (Butler) - Entire length	FW2-NT
KILL VAN KULL (Bayonne) - Westerly from a north-south line connecting Constable Hook (Bayonne) to St. George (Staten Island, N.Y.)	SE3
LAKE RICKONDA OUTLET STREAM (Monks) - That segment of the outlet stream from Lake Rickonda within Ringwood State Park	FW2-TM(C1)
LAKE STOCKHOLM BROOK	
(Stockholm) - Entire length, except tributaries described separately below	FW2-TM
(Stockholm) - Westerly tributary located entirely within the boundaries of the Newark Watershed	FW1 [tm]

REFERENCE NO. 6

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

ELIZABETH, N.J.

SCALE 1:24000

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

Other information concerning the wetland resources depicted on this document may be available. For information, contact:

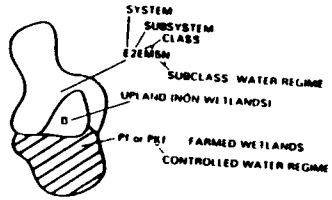
Regional Director (ARDE) Region V
U S Fish and Wildlife Service
1 Gateway Center, Suite 700
Newton Corner, Massachusetts 01258

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with Classification of Wetlands and Deep Water Habitats of the United States (An Operational Draft) Cowardin, et al, 1977. The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*)
- Dominance type (either vegetative or sedimentary) cannot be added to the map by the interested user
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated

AERIAL PHOTOGRAPHY

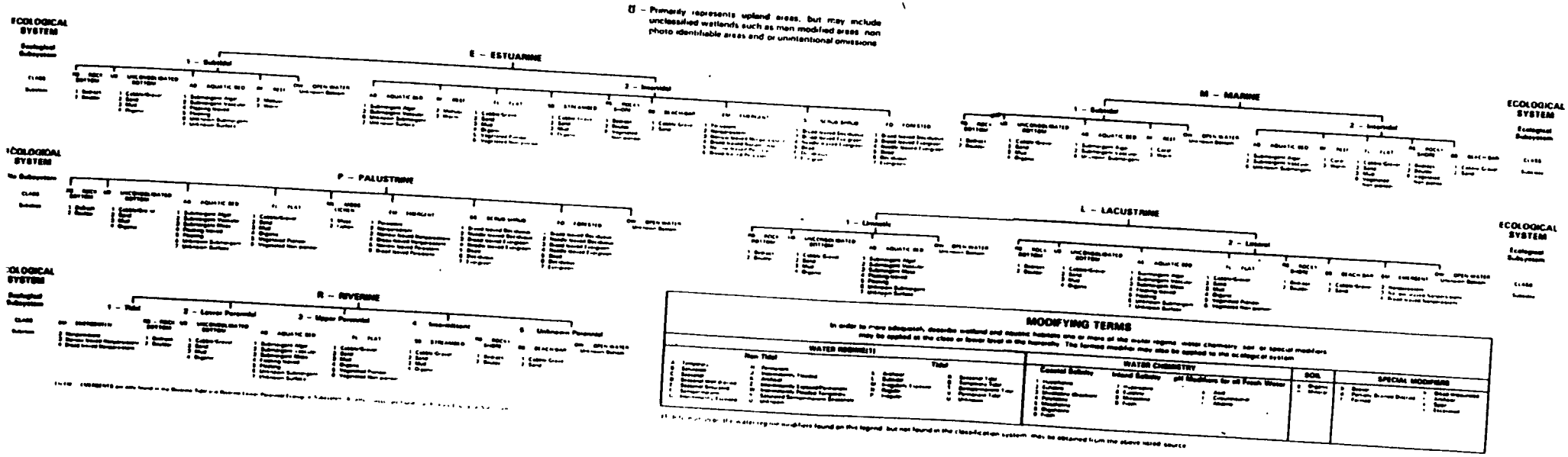
DATE	10 / 29 / 76
SCALE	1 80000
TYPE	B-W
DATE	/ /
SCALE	
TYPE	
DATE	/ /
SCALE	
TYPE	

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

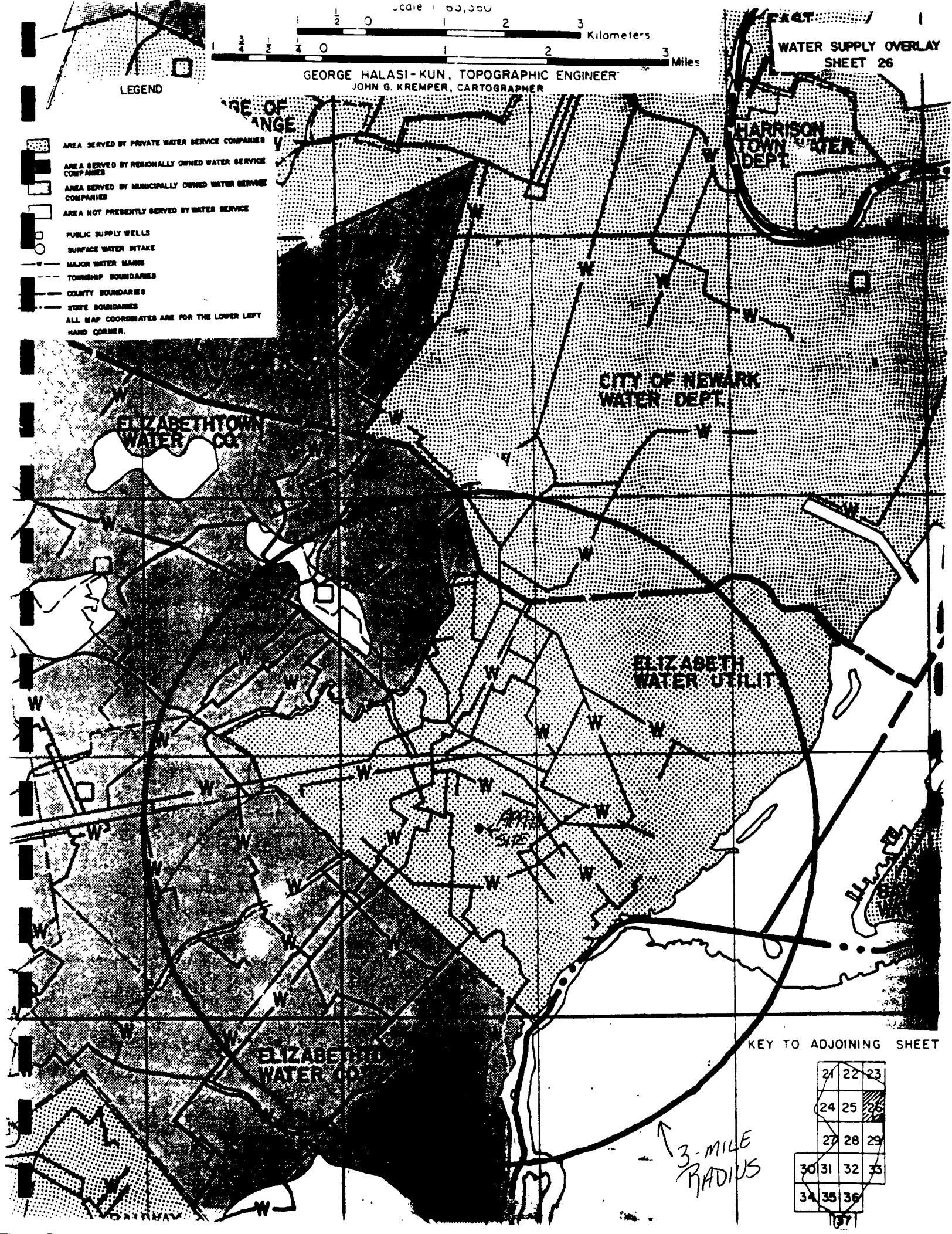
Prepared by Office of Biological Services for the National Wetlands Inventory

WETLAND LEGEND

U – Primarily represents upland areas, but may include unclassified wetlands such as man modified areas, non photo identifiable areas and or unintentional omissions



REFERENCE NO. 7


Scale 1:63,360
Kilometers
Miles
GEORGE HALASI-KUN, TOPOGRAPHIC ENGINEER
JOHN G. KREMPER, CARTOGRAPHER
WATER SUPPLY OVERLAY
SHEET 26
LEGEND
AREA SERVED BY PRIVATE WATER SERVICE COMPANIES
AREA SERVED BY REGIONALLY OWNED WATER SERVICE COMPANIES
AREA SERVED BY MUNICIPALLY OWNED WATER SERVICE COMPANIES
AREA NOT PRESENTLY SERVED BY WATER SERVICE
PUBLIC SUPPLY WELLS
SURFACE WATER INTAKE
MAJOR WATER MAINS
TOWNSHIP BOUNDARIES
COUNTY BOUNDARIES
STATE BOUNDARIES
ALL MAP COORDINATES ARE FOR THE LOWER LEFT HAND CORNER.
HARRISON TOWN WATER DEPT.
CITY OF NEWARK WATER DEPT.
ELIZABETHTOWN WATER CO.
ELIZABETH WATER UTILITY
ELIZABETHTOWN WATER CO.
3-MILE RADIUS
KEY TO ADJOINING SHEET
21 22 23
24 25 26
27 28 29
30 31 32 33
34 35 36
37

SOURCES

1. MIDDLESEX COUNTY PLANNING BOARD, COMPREHENSIVE WATER PLAN PHASE ONE; APPENDIX: COMPREHENSIVE WATER PLAN PHASE ONE; COMPREHENSIVE WATER PLAN PHASES TWO AND THREE; RECOMMENDED WATER AND SEWER SYSTEMS: PLANS AND PROGRAMS; 1968, 1969, 1970, 1971 CONSECUTIVELY.

2. UNION COUNTY MASTER PLAN PROGRAM, SUMMARY - SEWER AND WATER PLAN, 1971.

3. PASSAIC COUNTY WATER STUDY, 1969.

4. MORRIS COUNTY MASTER PLAN WATER SUPPLY ELEMENT, 1971.

5. INFORMATION SUPPLIED BY ESSEX COUNTY DEPARTMENT OF PLANNING.

6. HUDSON COUNTY MASTER PLAN ON LAND USE - SEWAGE AND WATER, 1963.

7. BERGEN COUNTY COMPREHENSIVE PLAN WATER FACILITIES, FINAL REPORT, 1970.

8. INFORMATION SUPPLIED BY BUREAU OF POTABLE WATER.

REFERENCE NO. 8

GEOLOGY AND GROUND-WATER RESOURCES OF UNION COUNTY, NEW JERSEY

By Bronius Nemickas

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations 76–73

Prepared in cooperation with
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL
PROTECTION, DIVISION OF WATER RESOURCES

June 1976

Methods of this Investigation

An inventory was made of public, industrial and domestic wells tapping the Brunswick Formation, Watchung Basalt and Pleistocene deposits. The well records are presented in Table 4 and well locations are shown in figure 2.

Geologic information was obtained from drillers' well logs and representative well logs are given in Table 6. A bedrock map on top of the Brunswick Formation and Watchung Basalt was constructed from well log information and is shown in figure 2. The thickness of the Pleistocene deposits can be determined from figure 2 by subtracting the bedrock elevation from the surface elevation.

Chemical analyses of ground water were made to identify the characteristic chemical and physical properties of the ground water in Union County. The chemical analyses of water samples from 59 wells are presented in Table 5 and their location is shown on figure 2.

Acknowledgments

The author wishes to thank well drillers, State, municipal, and industrial officials, and private individuals who supplied data on which this report is based. Acknowledgment is made for the records and logs of wells that were furnished from the files of the New Jersey Bureau of Geology and Topography and to Elizabethtown Water Company for making the water quality analysis available to the author. The cooperation of many individuals who permitted the use of their wells for water-level observation and collection of water samples is gratefully acknowledged.

GEOGRAPHY

Topography and Drainage

Union County is in the Piedmont Plateau, one of eight major physiographic divisions of the United States. The major topographic features of the Piedmont Plateau in Union County are: (1) the Watchung Mountains, two basaltic ridges with maximum altitudes of about 550 feet, trending parallel to the northwestern boundary of the county; and (2) a gently rolling plain sloping from about 100 to 150 feet at the eastern side of the Watchung Mountains to sea level at Arthur Kill.

The Watchung Mountains extend from Passaic County through Essex and Union Counties and terminate in Somerset County. The ridges are underlain by thick sheets of basaltic lava flows intercalated with the shales and sandstones of the Newark Group. These ridges trend generally northeast-southwest and have steep, rock escarpments on the east and gentle slopes on the west.

The rolling plain is broken by two topographic features. A broad irregular ridge with maximum altitudes of about 200 feet, an end moraine of the Wisconsin Glaciation, traverses the western edge of the plain area of the county in a roughly north-south direction. This ridge extends from Summit southward to Fanwood to just east of Plainfield (fig. 3). A second end moraine forms a broad low ridge trending roughly east-west in the area of Hillside and Union Townships and in Kenilworth Borough.

Union County lies within five major drainage basins (fig. 4). The western part of the county is drained by the Passaic River and by Green Brook which is within the Raritan River basin. The central part of the county is largely within the Rahway River basin. The eastern part of the county is within the Elizabeth River basin and the Arthur Kill basin.

Climate

The climate of Union County is largely continental with winds coming predominantly from the interior of North America. The summers are controlled by tropical air masses and the winter by polar continental air masses. From October to April the prevailing winds are from the northwest and from May to September the prevailing winds are from the southwest.

Union County has humid, warm summers, and moderately cold winters. Climatological data has been collected at Elizabeth by the U.S. Weather Bureau since 1894. Average annual precipitation is about 48 inches and the annual average temperature is 53°F. The average growing season or frost-free period is 187 days, from April 19 to October 23.

Population and Economy

The population of Union County as of the 1960 census is 504,255. The county is ranked fourth largest in population and second smallest in land area in the state. The population density as of the 1960 census was 4,910 per square mile. It is exceeded in population density only by Hudson and Essex Counties.

There are 21 municipalities in the county of which 8 are townships, 7 are boroughs, 5 are cities, and 1 is a town.

The economy of Union County is primarily industrial. The principal industrial products and the number of establishments are listed below:

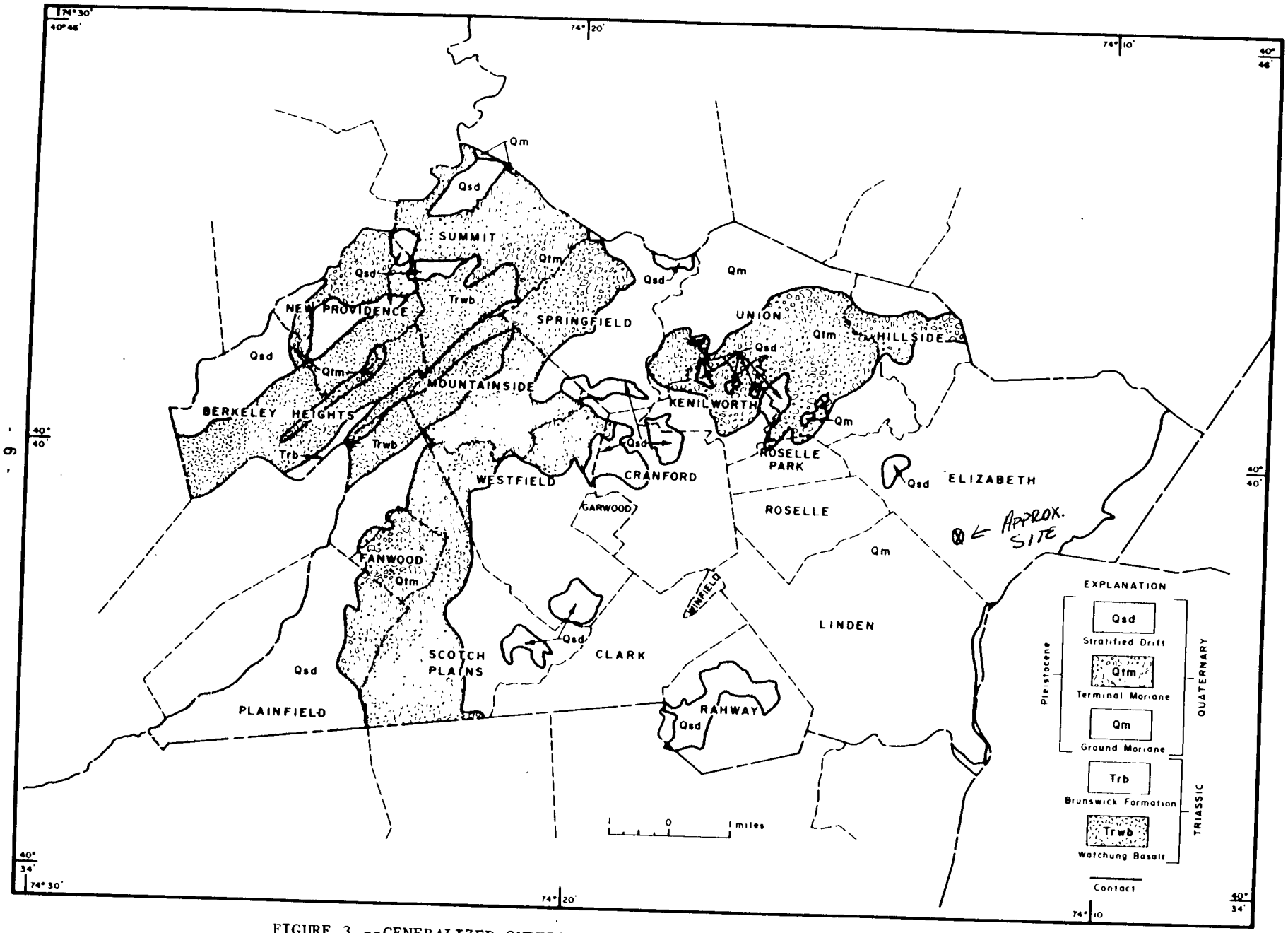


FIGURE 3.--GENERALIZED SURFICIAL GEOLOGIC MAP OF UNION COUNTY, NEW JERSEY.

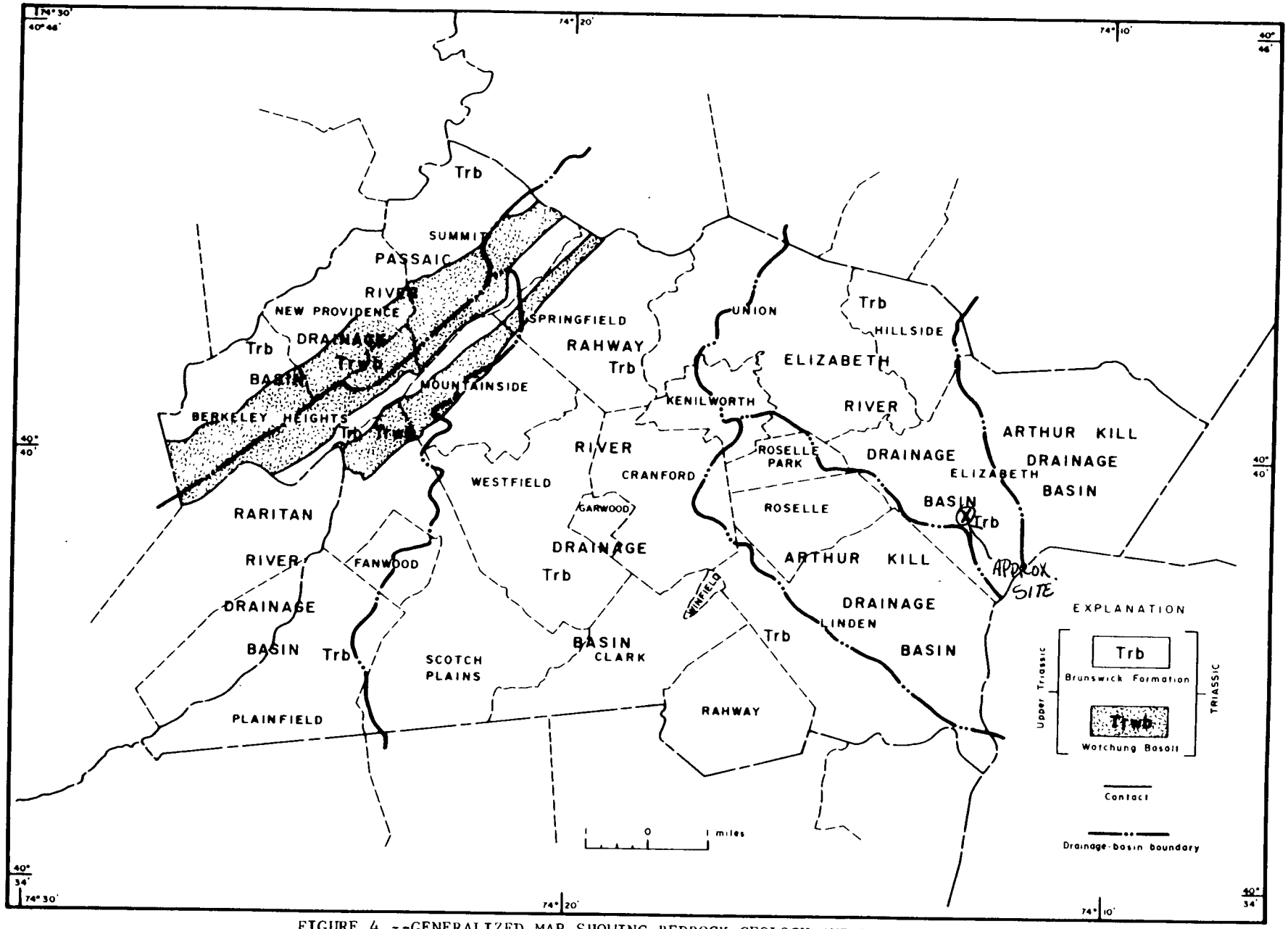


FIGURE 4.--GENERALIZED MAP SHOWING BEDROCK GEOLOGY AND DRAINAGE BASINS OF UNION COUNTY, NEW JERSEY.

Industrial Products	Number of Establishments
Chemicals and allied products	104
Fabricated metal products	226
Machinery, except electrical	275
Food and kindred products	71
Miscellaneous manufacturing	77
Printing and publishing	113
Furniture and fixtures	34
Instruments and related products	25
Textile mill products	14
Stone, clay, and glass products	26
Rubber and plastics products	63
Total	1,424

(New Jersey Department of Environmental Protection, 1967)

GEOLOGY

Newark Group

During the Late Triassic Epoch downfaulting produced a series of northeast-southwest trending basins in the Piedmont Plateau from Nova Scotia to North Carolina. Sedimentary and associated igneous rocks of Triassic age occupy the downfaulted basins and are known as the Newark Group. In New Jersey the Newark Group crops out in a band 16 to 30 miles wide trending northeast-southwest from the Delaware River to the Hudson River (fig. 1). Union County lies entirely within this band.

The Newark Group in New Jersey contains 15,000 to 20,000 feet of non-marine shales, mudstones, sandstones, conglomerates, and basic igneous rocks that unconformably overlie rocks of Paleozoic and Precambrian age. The sedimentary rocks of the Newark Group were largely derived from Paleozoic and Precambrian rocks to the southeast and deposited in a non-marine intermontane basin (Van Houten, 1965). During Triassic time the sedimentary rocks were intruded by a diabase sill, dikes, and covered by several flows of basalt.

The Newark Group underlying Union County consists of the Brunswick Formation and Watchung Basalt. The generalized geologic map (fig. 4) shows the areal distribution of the Triassic rocks underlying Union County. Figure 5 is a generalized section showing the geology and structure of Union County.

The Brunswick Formation consists of thin-bedded shales, mudstones, and sandstones which range in color from reddish-brown to gray. The reddish-brown color originates from reworked hematite which comprises 5 to 10 percent of the formation (Boch, 1959). The minerals of the Brunswick Formation include quartz, illite, muscovite, feldspar, and small amounts of calcite and gypsum. Primary structures such as ripple marks and mud cracks indicate that the Brunswick Formation was deposited in a shallow-water environment.

The regional strike of the Brunswick Formation in Union County is N50°E with dips 9° to 13°NW. The major joint sets strike approximately N45°E and N75°W and both sets have a vertical dip. The thickness of the formation is 6,000 to 8,000 feet.

The Watchung Basalt consists of three extensive basaltic lava sheets that are intercalated with the sedimentary rocks of the Brunswick Formation. The basalt flows are more resistant to erosion than the shales, mudstones, and sandstones and form prominent ridges. Two of the three lava sheets occur in Union County and form the First and Second Watchung Mountains. The third sheet forms a discontinuous ridge known as Long Hill and Hook Mountain in Morris County to the west of Union County.

The basalt flows are volcanic extrusive rocks which were formed by the outflow of lava onto the land surface. Rapid cooling of the flows produced a dense, aphanitic rock. Phenocrysts are present in the ground mass which give the basalt a porphyritic texture. The phenocrysts are usually augite and in some cases feldspar. The ground mass for the most part consists of augite and feldspar.

The basalt sheets vary in thickness from less than 300 feet in parts of the Long Hill flow to a maximum of about 1,200 feet in parts of the Second Watchung Mountain. The Second Watchung Mountain is a double flow sheet separated by a thin section of the Brunswick Formation. The thickest flow sheet is the upper flow of the Second Watchung Mountain which has a maximum thickness of about 800 feet.

Quaternary Deposits

Unconsolidated sediments deposited by glaciers or by glacial melt-water during the Pleistocene Epoch mantle the bedrock surface in Union County. These deposits consist of clay, silt, sand, gravel, and boulders. They are glacial, glaciolacustrine (deposited by glacial meltwater in lakes), or glacial fluvial (deposited by glacial meltwater in streams) in origin.

The Pleistocene sediments fall into three general classes: (1) end moraine--a moraine jointed across the course of a glacier at its farthest advance; (2) ground moraine--the material carried forward in and beneath the ice and finally deposited from its under surface; and (3) stratified

drift--deposits from glacial meltwater exhibiting both sorting and stratification. The stratified drift includes lacustrine (deposited in lakes) and fluviatile (deposited in streams) sands and clays.

Figure 3 is a surficial geologic map of Union County showing the extent of the end moraine, ground moraine, and stratified drift. West of the end moraine near Scotch Plains and Plainfield, stratified drift forms an outwash plain (fig. 3).

Before the last glaciation the rivers draining Union County cut deep valleys into the Brunswick Formation (fig. 2). Subsequently the valleys were filled and buried by glacial material. The thickness of the glacial deposits is controlled largely by the underlying bedrock topography. Figure 6 consists of three sections showing the altitudes of the bedrock valley floor and thickness of Pleistocene deposits in the bedrock valleys. These buried channels underlie parts of Hillside, Union, Springfield, Clark, and Scotch Plains Townships, and the Boroughs of Mountainside, New Providence and Kenilworth and the Cities of Summit and Rahway.

The Pleistocene sediments in the bedrock channels consist of unstratified and stratified clay, silt, sand, and gravel. Only the sand and gravel deposits of the stratified drift will yield large quantities of water to wells.

Deposits of Holocene (Recent) age cover only small areas and include river alluvium, and eolian deposits.

The stratigraphic units in Union County and their geologic and hydrologic characteristics are given in Table 1. Table 6 contains representative well logs indicating the variations in the lithologies of the geologic units.

GROUND WATER HYDROLOGY

Introduction

Water is continually being exchanged in a circulatory pattern between the earth and the atmosphere. In general, the amount of precipitation ultimately determines the amount of water available for man's use. Some of the precipitation that falls on land evaporates where it falls, some is absorbed by plants that later transpire the water back to the atmosphere, some flows overland to streams, and some infiltrates into the ground to become ground water. The ground water is discharged to streams, and streams flow to the oceans where the water can be evaporated back to the atmosphere.

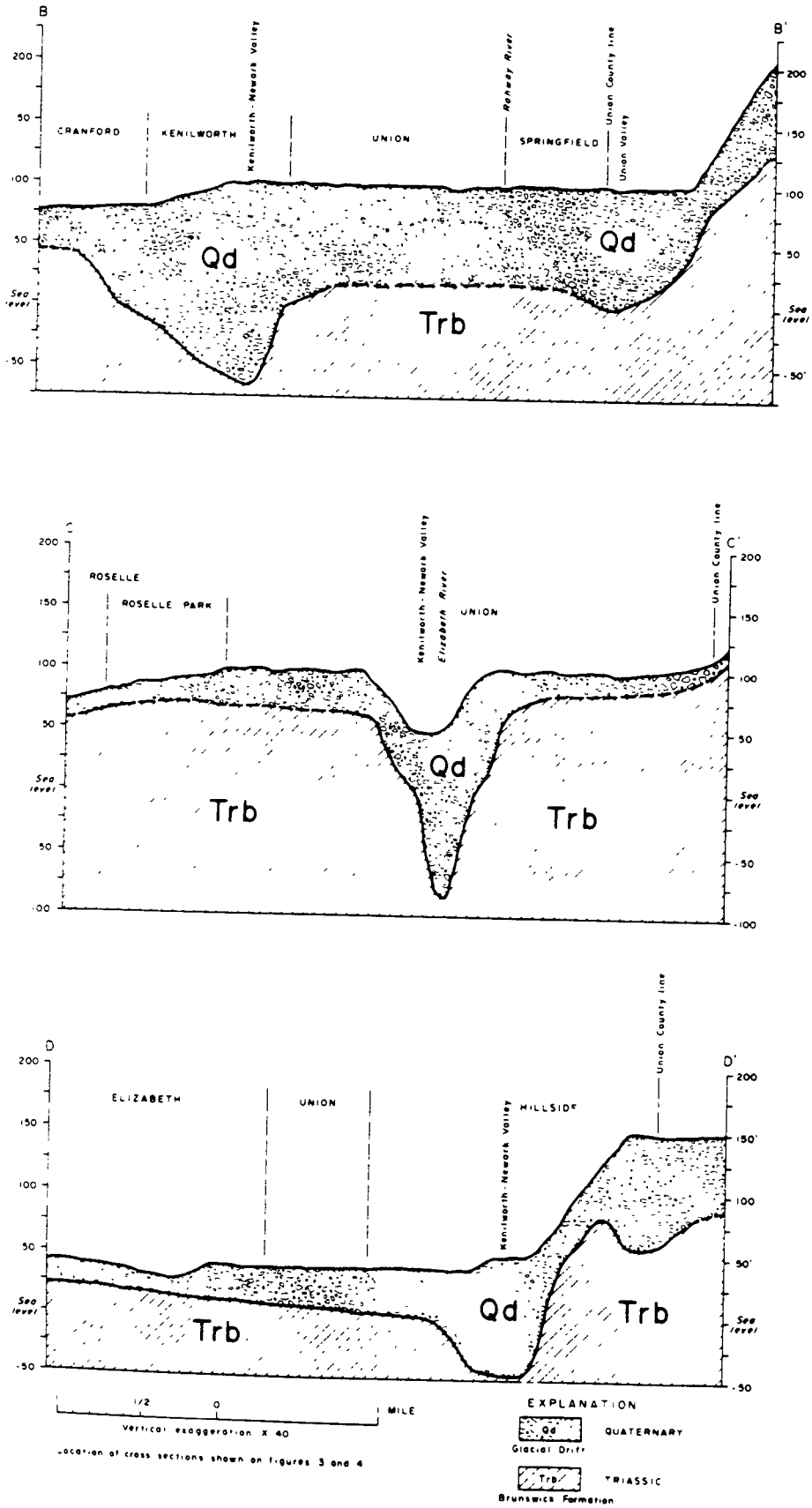


FIGURE 6.--GEOLOGIC SECTIONS SHOWING THE BURIED CHANNELS IN UNION COUNTY, NEW JERSEY.

Table 1.--Geology and hydrology of the rock units in Union County, New Jersey

Era	Period	Series	Formation or lithologic unit		Thickness (feet)	Lithology	Hydrologic characteristics
Cenozoic	Quaternary	Holocene	alluvium		0-25	Sand, silt, and mud in and along river channels.	Relatively impermeable deposits; retard intrusion of saline water through river beds.
			eolian deposits		0-10	Sand	Above water table; high rate of infiltration.
		Pleistocene	un-stratified drift (till)		0-200	Unstratified clay, sand and gravel; reddish brown in color. Forms the ground and end moraine deposits. Deposited by glaciers.	Because of low permeability, it is not an important aquifer in the County.
			stratified drift		0-60	Sand and gravel lenses which are stratified. Occurs as lenses in the till in the bedrock channels and inter-bedded with till in the end moraines. Deposited by water.	Important as an aquifer in the City of Rahway and in Union, Hillside and Springfield Townships and in Kenilworth Borough. At the City of Rahway and Hillside Township wells induce recharge from rivers.
						Unconformity	
Mesozoic	Triassic	Upper Triassic	Newark Group	Brunswick Formation	6,000-8,000	Interbedded, soft red shales, mudstones, and sandstones. Adjacent to the Watchung Basalt it is altered to a hornfels.	Most extensive and most important aquifer in Union County. Water stored in and transmitted along fracture and joint systems which decrease in number and volume with depth. Both artesian and water-table conditions exist.
				Watchung Basalt	300-800	Basaltic lava sheets inter-calated with the sedimentary rocks of the Newark Group. Two of the sheets crop out in Union County. The basalt is a dense, aphanitic, extrusive rock. Augite and feldspars are the chief minerals.	Minor aquifer in the county. Well yields are low to moderate.

The specific capacity of a well, the rate of yield per unit drawdown for some time interval, generally gallons per minute per foot of drawdown, can be a good measure of the transmissibility of the rocks. High specific capacities generally suggest a high coefficient of transmissibility, and low specific capacities generally suggest a low coefficient of transmissibility. However, specific capacity also is affected by the coefficient of storage, the thickness and boundary conditions of the aquifer penetrated by the well, and development and construction of the well.

For a more complete discussion of general ground-water hydraulics, the reader is referred to Theis (1935, p. 519-524), Ferris (1949, p. 226-272), Todd (1959, p. 77-114), DeWiest (1965, p. 161-183), and Davis and DeWiest (1966, p. 156-374).

Water-bearing Properties of Major Rock Units

Newark Group

Brunswick Formation

The Brunswick Formation of Late Triassic age is the major aquifer in Union County and underlies most of the county. Water in this formation occurs in joints and fractures. These joints and fractures become progressively tighter and fewer with increasing depth below land surface. Only moderate quantities of water can be stored or transmitted in these fractures.

Ground water occurs under both unconfined and confined conditions in the Brunswick Formation. Unconfined ground water occurs mainly in the upland areas where overlying unconsolidated sediments are thin or absent. In the lowland areas in the southern and eastern part of Union County the rocks are mantled by unconsolidated Pleistocene deposits that, in most places, contain silt and clay beds. In the lowland areas the silt and clay beds may confine water in the underlying rocks. Wherever such confinement occurs, water beneath the impermeable layers is under artesian pressure. In a few areas the artesian head is above land surface resulting in flowing wells. Locally, artesian conditions result from differences in permeability within the rock layers caused by varying degrees of fracturing, or weathering, or a combination of both.

Several pumping tests have been conducted on wells tapping the Brunswick Formation in Union County. The coefficient of transmissibility determined from five of these tests ranged from 5,900 to 25,400 gpd per ft; most of the values lie between 15,000 and 25,000 gpd per ft. The average coefficient of storage computed from these tests is about 0.00005.

Results of pumping tests indicate that the Brunswick Formation is anistropic; that is, its ability to transmit water is not equal in all directions. The greatest drawdowns caused by pumping are observed in wells aligned along the strike of the beds with respect to the pumping well. The smallest drawdowns are observed in wells aligned transverse to the strike (Vecchioli, 1967). These pumping test observations have been interpreted to indicate that joints and factures which strike parallel to the strike of the bedding are better developed and interconnected than joints and fractures which strike in other directions. Therefore, minimum interference between pumping wells in well fields tapping the Brunswick Formation can be achieved by aligning the wells across the strike of the beds rather than parallel to the strike.

The average reported yield of 230 public-supply, industrial, and commercial wells (table 4) tapping the Brunswick Formation is 200 gpm; yields range from 12 to 870 gpm. A better indication of the potential yield of properly located and developed wells tapping the Brunswick Formation can be obtained from analysis of yields of large diameter (10 inch or greater) wells. The large diameter wells, generally the deeper wells, represent attempts to develop the maximum supply of water. The average yield of 109 large diameter wells (table 4) is 310 gpm; yields range from 23 to 870 gpm.

The distribution of well yields is as follows:

Yield (gpm)	230 Wells	109 Large Diameter Wells
0 - 50	18	2
51 - 100	42	9
101 - 150	36	8
151 - 200	32	14
201 - 250	25	10
251 - 300	20	13
301 - 350	16	15
351 - 400	10	7
401 - 450	6	6
451 - 500	9	9
501 - 550	10	10
551 - 600	2	2
600	4	4

Figure 9 shows the cumulative frequency distribution of reported yields of wells in the Brunswick Formation. It can be seen on the graph that 50 percent of the 230 wells have yields equal to or less than 180 gpm; 50 percent of the large diameter wells have yields equal to or less than 300 gpm. Many of the higher yielding wells occur where the Brunswick Formation is overlain by relatively thick, saturated glacial deposits that readily pass water downward into the fractures in the Brunswick Formation.

The specific capacities of 205 wells (6 to 12 inches in diameter) in the Brunswick Formation range from 0.04 to 25 and average 3.5 gpm per foot of drawdown; 14 of the wells have specific capacities greater than 10 gpm per foot of drawdown. The depths of the wells range from 100 to 1,108 feet and average 387 feet.

Figure 10 is a cumulative frequency distribution graph of specific capacities of wells tapping the Brunswick Formation in Union County. In figure 10, specific capacities are related to the well diameter. The larger diameter wells have the higher specific capacities. Median specific capacities are 1.7 for 6 and 8-inch diameter wells, 2.0 for 10 inch diameter wells and 3.1 for 12 inch and larger diameter wells. The higher specific capacities in the larger diameter wells can be attributed to better well development, well site selection and decreased well entrance losses.

In table 2, specific capacities are listed in percentile on the basis of depth of well drilled below land surface. In order to minimize the effect of well diameter on specific capacity, separate listings for larger and smaller diameter wells are given. Wells between 200 and 600 feet deep, in general have higher specific capacities than wells of shallower or greater depths. This relationship suggests that the best water-producing zones in the Brunswick Formation are encountered between depths of 200 and 600 feet. Below 600 feet the fractures and joints are less enlarged and generally drilling to greater depths will not produce significantly greater well yields.

Wells tapping the Brunswick Formation generally draw water from several water-bearing zones. In areas where the rocks are exposed or covered by a thin layer of unconsolidated sediments the shallow water-bearing zones contain unconfined water to a depth of about 200 or 300 feet. If wells penetrate to depths between 200 and 600 feet one or more confined zones of greater permeability are intercepted. The wells that are drilled between 200 to 600 feet in general have the greatest yields.

Watchung Basalt

The Watchung Basalt is a minor aquifer and underlies the western edge of Union County. In this formation vesicles add primary porosity to the secondary porosity developed from the joints and fractures. However, all these openings constitute only a small part of the total volume of the basalt and their capacity to store and transmit water is poor.

WELL YIELD, IN GALLONS PER MINUTE

REFERENCE NO. 9

GERAGHTY & MILLER SPECIAL REPORT

The New Jersey Ground-Water Situation

by David W. Miller

August, 1979 (see Telecon note - 02-8803-32-SI

GERAGHTY & MILLER, INC.
Groundwater
Consultants

HACKENSACK, NEW JERSEY
7 Atlantic Street
Hackensack, New Jersey 07601
(201) 646-1400

SYOSSET, NEW YORK
North Shore Atrium
6800 Jericho Turnpike
Syosset, New York 11791
(516) 921-6060

THE AQUIFER SYSTEMS

For a general discussion of ground-water conditions in New Jersey, the state can be divided into three broad geographic areas based on the distinctive rock types that occur in each (Figure 1). The Coastal Plain physiographic province is the largest area, and encompasses more than 5,000 square miles in the southern portion of the state. The geology of the Coastal Plain is characterized by a southeasterly dipping and thickening sequence of unconsolidated sediments.

The Triassic Lowlands are underlain by thousands of feet of red shale, with some sandstone, siltstone, conglomerate, basalt and diabase. The geologic formations in the Highlands region consist of hard crystalline rocks such as the Precambrian gneisses and quartzites; carbonates, such as the Kittatinny limestone; and relatively dense sandstones, conglomerates and shales, such as the Martinsburg.

Bedrock in both the Triassic Lowlands and the Highlands is overlain by unconsolidated deposits of glacial origin. In places, these surficial deposits are thick and permeable, and are commonly in direct hydraulic connection with the underlying bedrock and adjacent streams, rivers, and lakes.

THE TRIASSIC LOWLANDS AND THE HIGHLANDS REGION OF NORTHERN NEW JERSEY

The geology and hydrology of northern New Jersey are considerably more complex than the Coastal Plain region. To simplify, it has been divided into two broad areas, the Triassic Lowlands and the Highlands Region (Figure 1). Unlike the Coastal Plain, where the aquifers consist of extensive beds of unconsolidated deposits, the primary water-bearing units in northern New Jersey are sedimentary and crystalline rocks (Figure 11). These vary considerably in their ability to yield water, depending on rock type and location. Both regions are also heavily dependent upon unconsolidated glacial deposits for water supply and where these occur in buried, eroded rock channels and are thick and permeable, the glacial sediments represent the most important source of ground water in both the Triassic Lowlands and the Highlands. Figure 12 shows the general major deposits of glacial origin that may have some ground-water potential.

Geology and Hydrology

Triassic Sediments: The Triassic Lowlands are almost entirely underlain by sedimentary Brunswick Shale. Although its primary permeability is low, appreciable amounts of water are found in joints and fractures. However, unless a significant number of these joints and fractures are penetrated by a well, yields can be relatively small. The direction of highest permeability and of the greatest movement of water in response to pumping tends to parallel the strike of the beds, generally southwest to northeast.

Glacial Sediments: Unconsolidated deposits overlying rock in northern New Jersey consist generally of till, clay, or stratified drift. These deposits are thickest in the valleys and thin or absent in upland areas. Permeable sands and gravels contained within the valley fill sediments that are suitable for ground-water development range in thickness from 50 to several hundred feet. Individual beds that can support high capacity wells are not extensive, and lithology may change radically over as little as 100 feet within the same valley. Well yields commonly reported for the glacial sediments represent successful wells located from a program of test drilling and pumping.

Although the rock aquifers have been mapped in some detail throughout both the Triassic Lowlands and the Highlands Region, the areal extent of important glacial aquifers is relatively unknown except in some of the more heavily developed areas of eastern Morris and western Essex Counties, Union County, the Ramapo River subbasin, and the Rockaway River subbasin (Figure 12).

Public supply and industrial wells tapping the more permeable stratified drift are almost uniformly capable of producing several hundred thousand gpd to more than one mgd. For example, yields of wells completed in Union County in 50 to 200 feet of sand and gravel sediments in Kenilworth-Newark Valley, Summit Valley, Union Valley, and Rahway Valley, average approximately 400 gpm. Wells in Essex and Morris Counties tapping glacial sands and gravels adjacent to the Passaic River and its tributaries produce one to 1.5 mgd. Total pumpage from the system of buried valleys in this latter area is about 20 mgd, with the highest yields from formations receiving recharge from adjacent streams.

Somerset County: Surface- and ground-water resources are both utilized to meet constantly increasing requirements. Surface supplies are primarily obtained from the Neshanic, Raritan, and North Branch Rivers in the west, the Millstone River in the southeast, and the Raritan River in central Somerset. A County Planning Board study has estimated that surface water will eventually supply 80 percent of the county's total public water system demands. Supplies for areas removed from major population centers will continue to be provided by ground-water.

The maximum potential yield of the aquifers in Somerset County has not been quantified. However, there have been no major supply or quality problems reported and additional ground-water development appears feasible.

Sussex County: An inventory of the major public utility systems in Sussex County indicates that 14 percent use surface water, 67 percent rely on wells, and the remaining 19 percent use both. Surface systems, predominant in and around the larger towns and boroughs, draw much of their supply from the Delaware, Paulins Kill, and Wallkill Rivers. Rural areas generally depend upon domestic wells.

An evaluation of industrial and public supply pumpage, which is scattered throughout the south-southeastern portion of Sussex County, and the area's general recharge patterns indicates that the consolidated rock aquifers are not being utilized to their maximum potential.

Union County: Public supply from ground-water sources is derived principally from the Triassic shales. The only pumpage from unconsolidated

sediments is in the southern and extreme northern parts of the county.

Analysis of regional recharge indicates that there may be serious problems of overpumping. Union County is almost entirely sewered, and virtually all usage is consumptive. Specific case histories of water-level declines do not exist in the literature, and the water-level monitoring system in the county cannot identify problems if they do exist. However, present pumpage appears to exceed maximum potential yield.

Warren County: Surface supplies are primarily obtained from the Paulins Kill River in north central Warren and the Musconetcong and Delaware Rivers which form the southeastern and northwestern boundaries of the county. In rural areas, where surface water has not been developed, domestic wells are the principal source of supply.

Ground-Water Quality

The water in the sedimentary rock aquifers of the Triassic Lowlands generally ranges from slightly acidic to slightly alkaline (pH 6.3 to 8.5). The quality is quite variable and is generally much more mineralized than in most of the other aquifers. Total dissolved solids generally range from about 100 mg/L (milligrams per liter) to over 500 mg/L. In most instances, water in the rock aquifer is less mineralized in the recharge areas at higher altitudes and more mineralized in discharge areas at low altitudes. This is apparently a function of the distance and travel time of the ground water through mineralized formation materials. The degree of mineralization often becomes greater with increasing depth. Ground water is moder-

mineralized water is found in stratified drift underlain by Precambrian rocks than in stratified drift underlain by shales and sandstones of the Triassic Lowlands. Where there is pumpage from deposits associated with streams, the water induced from the stream significantly affects the quality of ground water pumped from wells.

Salt-water encroachment has been noted in the Triassic shales of the Newark area where heavy industrial pumpage lowered water levels more than 100 feet. Data on the current status of this problem are not readily available. Saline water is also encountered in some unconsolidated deposits adjacent to estuaries.

Summary

Ground water serves as a major municipal, industrial, and domestic source in northern New Jersey. Where surface-water sources are being used to their capacity, even greater dependence will be placed on ground water. However, there are a number of significant constraints on continued development of ground water. In counties such as Bergen, Essex, southern Passaic, Union, and eastern Morris, heavy pumpage of the Brunswick shale and the stratified drift deposits together with consumptive use, has overstressed aquifers on a local basis and limited the availability of new ground-water supplies. In addition, the high degree of urbanization has eliminated many potential sites for new wells and has reduced recharge to the aquifer. In many cases, the large-scale development of particular aquifer areas has undoubtedly resulted in substantial impacts on surface-water sources. Some potential for developing new supplies does exist, but

Figure 1 - PRINCIPAL GEOLOGIC REGIONS

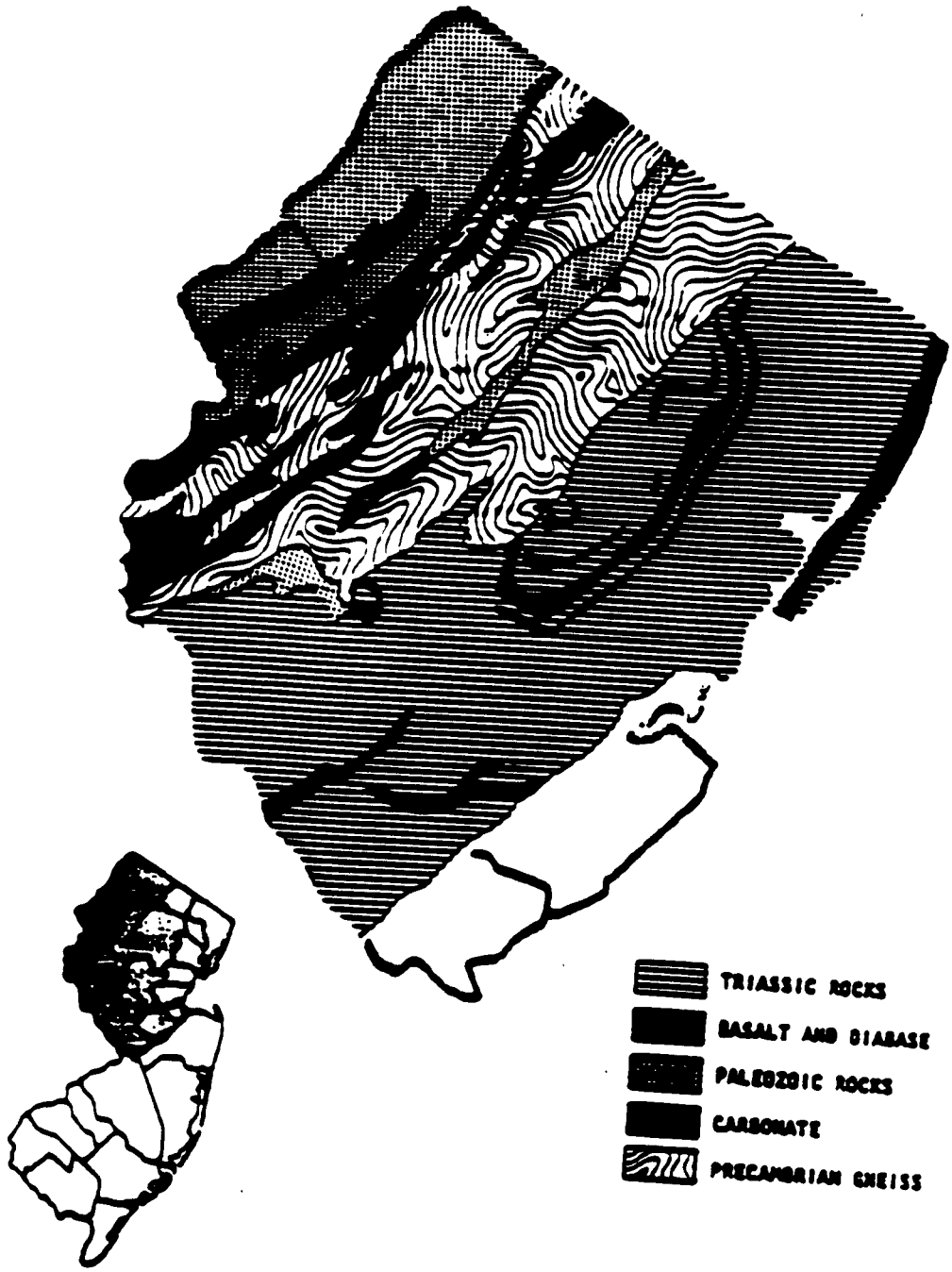


Figure 11 - BEDROCK GEOLOGY IN NORTHERN NEW JERSEY

Figure 12 - POTENTIAL UNCONSOLIDATED AQUIFERS IN NORTHERN NEW JERSEY

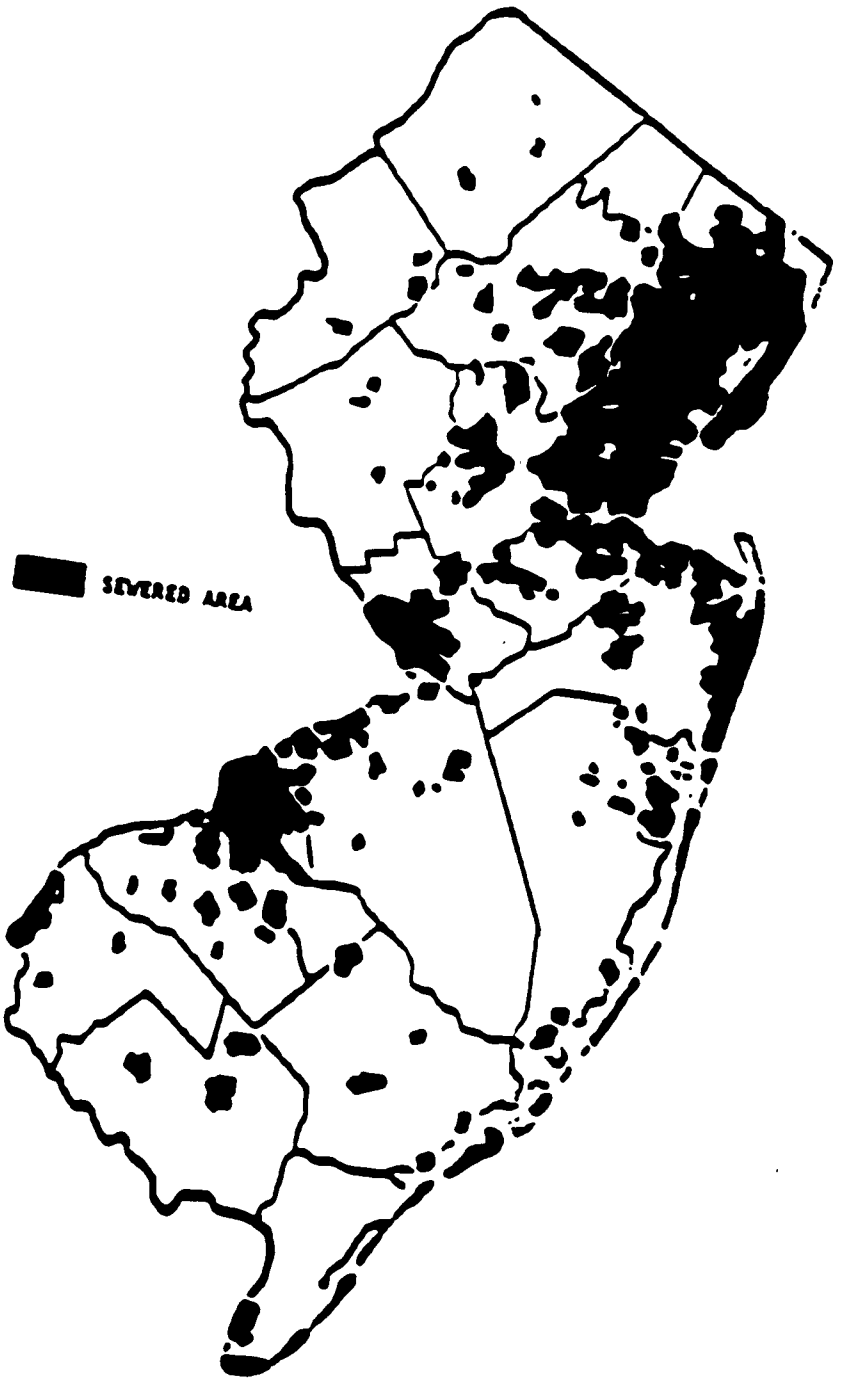


Figure 13 - EXTENT OF SEWERED AND UNSEWERED AREAS

REFERENCE NO. 10

NUS CORPORATION
SUPERFUND DIVISION

PROJECT NOTES

TO: FILE: ELIZABETH COAL GAS SITE #2 DATE: 7/30/90

FROM: R. SETTINO COPIES:

SUBJECT: AERIAL PHOTOS OF ELIZABETH COAL GAS SITE #2

REFERENCE: FILE: ELIZABETH COAL GAS SITE #2; TDD No: 02-9004-38

Aerial photographs of the site were obtained to determine site boundaries and also to give an insight about site history. Photos were obtained for the following years from the following companies:

-- April 28, 1940 -- Western Atlas International Aero Service, Houston, TX.
-- April 16, 1959 -- Robinson Aerial Surveys, Inc., Newton, NJ
-- December 4, 1966 -- Robinson Aerial Surveys, Inc., Newton, NJ
-- 1969-1970 -- Union County Planning Commission, Union, NJ
-- Spring 1980 -- Union County Planning Commission, Union, NJ
-- April 28, 1940; March 8, 1990 -- USEPA/EPIC

The following observations were made from the photos:

① The 1940 photos show numerous structures on site. The 1959 and 1966 photos show that most of these were removed during this time.

② The 1940 photo shows that during that time the site apparently ended along the northwest side of Centre St.

③ The photos show no apparent waste or biota contamination attributable to the site.

④ The 1959 and 1966 show the baseball field was built between these years.

⑤ The river was apparently bulkheaded between 1966 and 1990.

7/30/90

NUS 443A 58 1182

REFERENCE NO. 11

IN REPLY REFER TO:

ES-03

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Fish and Wildlife Enhancement
927 North Main Street (Bldg. D)
Pleasantville, New Jersey 08232
(609) 646-9310

August 9, 1990

Richard M. Settino
NUS Corporation
1090 King Georges Post Road, Suite 1103
Edison, New Jersey 08837

Dear Mr. Settino:

This letter is in response to your July 13, 1990, request to the Fish and Wildlife Service (Service) for information on the presence of federally listed or proposed endangered and threatened species within the study area of a site located in Elizabeth, New Jersey that is under study for the U.S. Environmental Protection Agency's Superfund Program.

This response is provided pursuant to the Endangered Species Act (Act) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species and is intended to assist your assessments, investigations and planning being conducted pursuant to Section 104 (a) of the Comprehensive Environmental Response, Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act. These comments do not represent any position the U.S. Department of the Interior may adopt concerning possible injury to natural resources under the Department's trusteeship.

The Hackensack Meadowlands provide feeding habitat for the endangered peregrine falcon (Falco peregrinus) which nests on bridge structures in the New York/New Jersey metropolitan area. Peregrines tend to prefer marshes and riparian habitats for hunting, as these areas tend to concentrate shorebird and passerine prey, and may travel extensive distances in search of food. In addition to the peregrine falcon, transient appearances of the endangered bald eagle (Haliaeetus leucocephalus) may be expected. No other federally listed or proposed threatened or endangered flora or fauna are known to exist within the study area.

Enclosed is a summary of federally listed and candidate species in New Jersey for your information. Candidate species are those species under consideration by the Service for possible inclusion on the List of Endangered and Threatened Wildlife and Plants. Although these species receive no substantive or procedural protection under the Endangered Species Act, the Service encourages federal agencies and other planners to consider candidate species in the project planning process. The New Jersey Natural Heritage Program provides the most up-to-date data source for candidate species in the State, as well as maintaining information on State listed species, and may be contacted at the following address:

Mr. Thomas Breden
Natural Heritage Program
Division of Parks and Forestry
CN 404
Trenton, New Jersey 08625
(609/984-0097)

Should the Natural Heritage Program data search reveal the presence of any candidate species on the site, the Service should be contacted to ensure that these species are not adversely affected by project activities.

Further information on State listed species may be obtained from the following office:

Ms. JoAnn Frier-Murza
Endangered and Nongame Species Program
Division of Fish, Game and Wildlife
CN 400
Trenton, New Jersey 08625
(609/292-9101)

Information contained in this letter and additional information obtained from the aforementioned sources represents the public interest for fish and wildlife resources and should warrant full consideration in the project planning process. The Service requests that no part of this letter be taken out of context and if reproduced, the letter should appear in its entirety.

Please contact Lynn Wilson of my staff should you have any questions or require further assistance.

Sincerely,

John Staples
Acting Supervisor

Enclosures

revised 5/90

FEDERALLY ENDANGERED AND THREATENED SPECIES IN NEW JERSEY

An **ENDANGERED SPECIES** is any species which is in danger of extinction throughout all or a significant portion of its range.

A **THREATENED SPECIES** is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

FISHES

Sturgeon, shortnose*	Acipenser brevirostrum	E

REPTILES

Turtle, Atl. Ridley*	Lepidochelys kempii	E
Turtle, green*	Chelonia mydas	T
Turtle, hawksbill*	Eretmochelys imbricata	E
Turtle, leatherback*	Dermochelys coriacea	E
Turtle, loggerhead*	Caretta caretta	T

BIRDS

Eagle, bald	Haliaeetus leucocephalus	E
Falcon, Am. peregrine	Falco peregrinus anatum	E
Falcon, Artic peregrine	Falco peregrinus tundrius	T
Plover, piping	Charadrius melodus	T
Tern, roseate	Sterna dougallii dougallii	E

MAMMALS

Whale, blue*	Balaenoptera musculus	E
Whale, finback*	Balaenoptera physalus	E
Whale, humpback*	Megaptera novaeangliae	E
Whale, right*	Balaena glacialis	E
Whale, sei*	Balaenoptera borealis	E
Whale, sperm*	Physeter catodon	E

PLANTS

Pogonia, small whorled	Isotria medeoloides	E
Swamp pink	Helonias bullata	T
Orchid, eastern prairie fringed	Platanthera leucophaea	T+

MUSSELS

Dwarf wedge mussel	Alasmodonta heterodon	E+

E: endangered species
T: threatened species
+: presumed extirpated

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.

(note: for complete listing of Endangered and Threatened Wildlife and Plants refer to 50 CFR 17.11 and 17.12, January 1, 1989)

revised 5/90

CANDIDATE SPECIES IN NEW JERSEY

CANDIDATE SPECIES are species which appear to warrant consideration for addition to the List of Endangered and Threatened Wildlife. Although these species receive no substantive or procedural protection under the Endangered Species Act, the Service encourages federal agencies and other planners to give consideration to these species in the environmental planning process.

VERTEBRATES

Turtle, bog	Clemmys muhlenbergi	2
Terrapin, northern diamondback	Malaclemys terrapin terrapin	2
Snake, northern pine	Pituophis melanoleucas melanoleucas	2
Shrike, migrant loggerhead	Lanius ludovicianus migrans	2
Bat, eastern small-footed	Myotis subulatus leibii	2
Rabbit, New England cottontail	Sylvilagus transitionalis	2
Shrew, long-tailed	Sorex dispar	2
Shrew, Tuckahoe masked	Sorex cinereus nigriculus	2
Woodrat, eastern	Neotoma floridana magister	2

INVERTEBRATES

Beetle, northeastern beach tiger	Cicindela dorsalis dorsalis	1
Beetle, cobblestone tiger	Cicindela marginipennis	2
Butterfly, Mitchell satyr	Neonympha mitchelli	2
Butterfly, regal fritillary	Speyeria idalia	2
Butterfly, tawny crescent	Phyciodes batesi	2
Dragonfly, banded bog skimmer	Williamsonia lintneri	2
Moth, Albarufan dagger	Acronicta albarufa	2
Moth, Bucholz' dart	Agrotis bucholzi	2
Moth, Daecke's pyralid	Crambus daeckeellus	2*
Moth, Hebard's noctuid	Erythroecia hebardi	2
Moth, Lemmer's noctuid	Lithophane lemmeri	2
Moth, precious underwing	Catocala pretiosa	2

PLANTS

Beaked-rush, Knieskern's	Rhynchospora knieskernii	1
Blazingstar	Liatris borealis	2
Bog asphodel	Narthecium americanum	1
Boneset, Pine Barrens	Eupatorium resinosum	2
Bulrush, Long's	Scirpus longii	2
Butternut	Juglans cinerea	2

Chaffseed	Schwalbea americana	1
Grass, sand	Calamovilfa brevipilis	2
Joint-vetch, sensitive	Aeschynomene virginica	2
Lobelia, Boykin's	Lobelia boykinii	2
Meadowbeauty, awned	Rhexia aristosa	2
Micranthemum, Nuttall's	Micranthemum micranthemoides	1*
Morning-glory, Pickering's	Stylisma pickeringii var. pickerigii	2
Panic grass, Hirst's	Panicum hirstii	2
Pigweed, sea-beach	Amaranthus pumilus	2
Pondweed	Potamogeton conifervoides	2
Rush, New Jersey	Juncus caesariensis	2
Sedge, variable	Carex polymorpha	2
Spring beauty	Claytonia sp.	2
Spurge, Darlington's	Euphorbia purpurea	2
Tick-trefoil, ground-spreading	Desmodium humifusum	2
Verbena	Verbena riparia	2?

STATUS

1: Taxa for which the Service currently has substantial information to support the appropriateness of proposing to list the species as threatened or endangered. Development and publication of proposed rules on these species is anticipated.

2: Taxa for which information now in possession of the Service indicates that proposing to list the species as threatened or endangered is possibly appropriate, but for which conclusive data are not available to support proposed rules at this time.

* indicates those species for which there have been no authenticated records in New Jersey since 1963; some of these are possibly extinct, but further research is needed to determine their status with any confidence.

? indicates those species for which occurrence in New Jersey is questionable.

(Note: for complete listing of taxa under review refer to Federal Register Vol. 54, No. 4, January 6, 1989 (Animal) and Vol. 55., No. 35, February 21, 1990 (Plants)).

REFERENCE NO. 12

Uncontrolled Hazardous Waste Site Ranking System

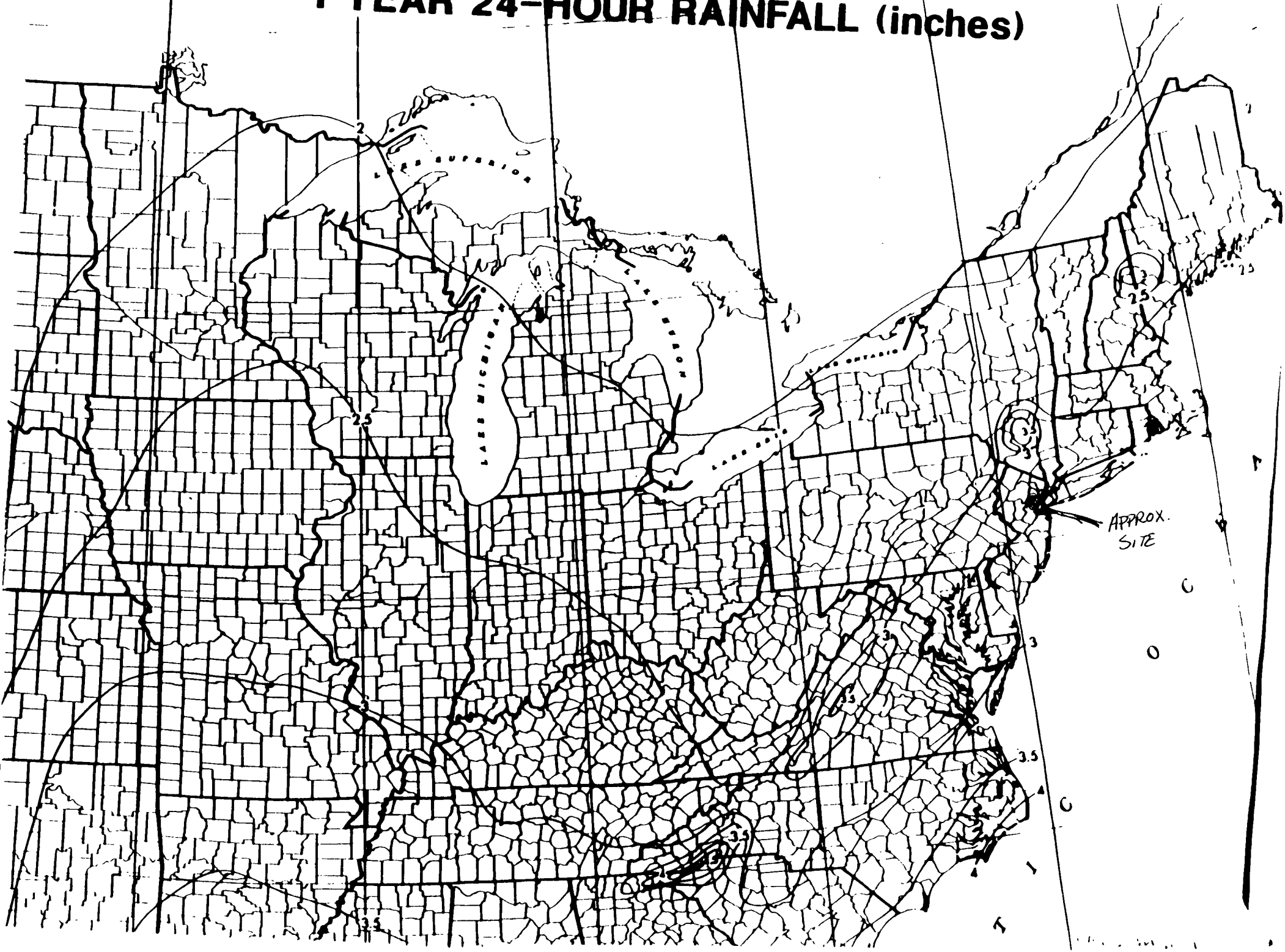
A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

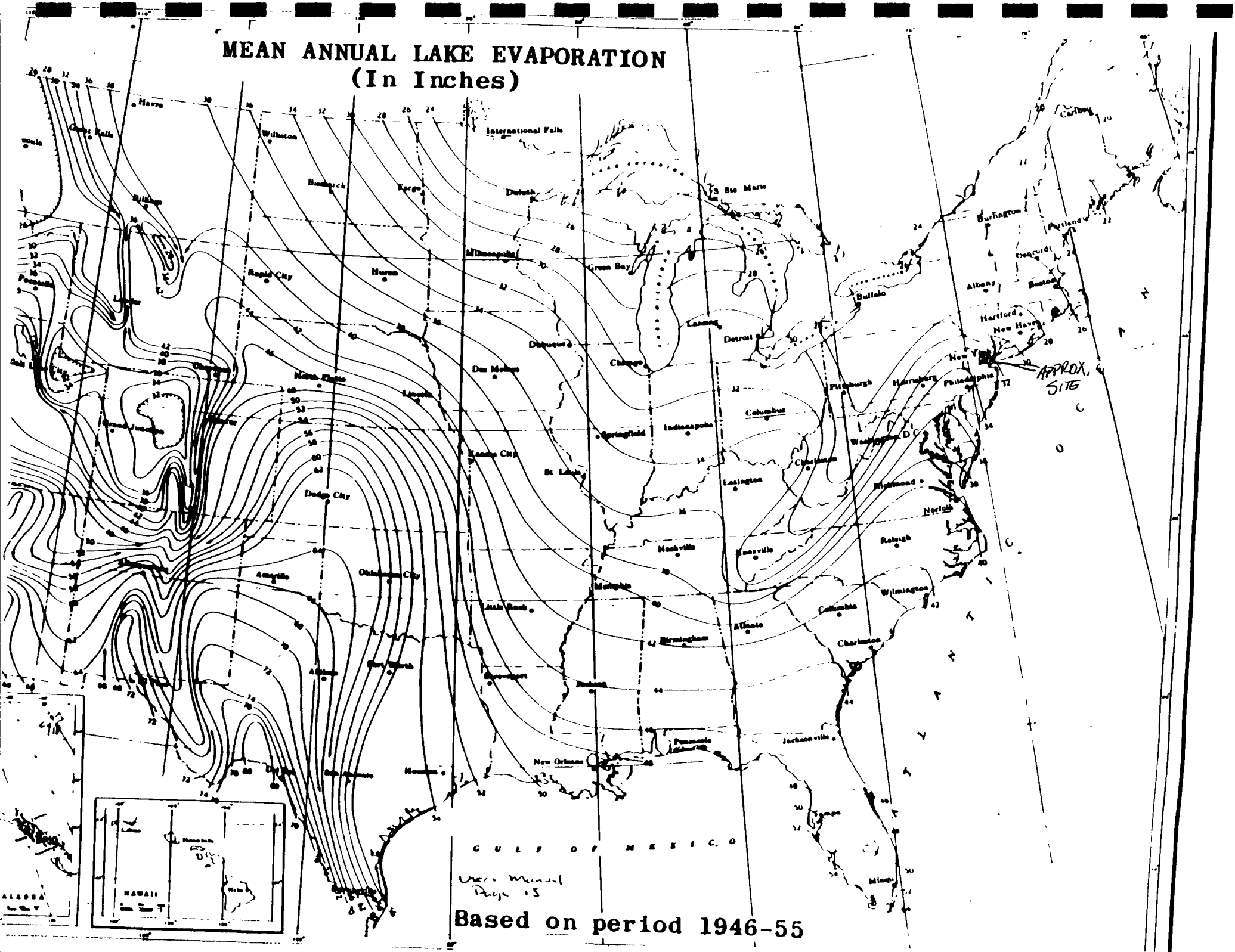
United States
Environmental Protection
Agency

1984

YEAR 24-HOUR RAINFALL (inches)



MEAN ANNUAL LAKE EVAPORATION
(In Inches)



Based on period 1946-55

NORMAL ANNUAL TOTAL PRECIPITATION (Inches)

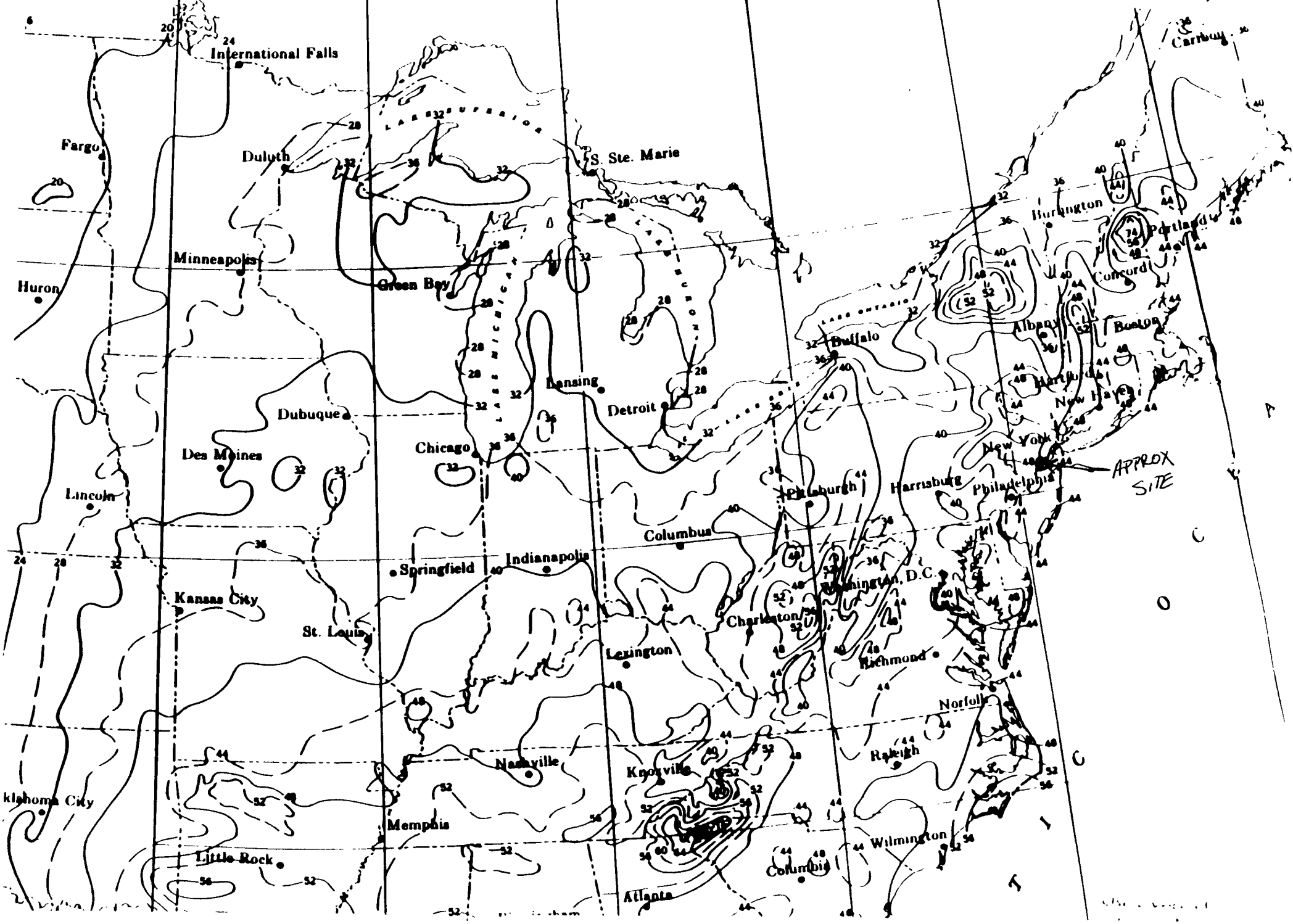


TABLE 2

PERMEABILITY OF GEOLOGIC MATERIALS*

Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWest ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

REFERENCE NO. 13

GSC-TR8645

GRAPHICAL EXPOSURE MODELING SYSTEM

(GEMS)

USER'S GUIDE

VOLUME 2. MODELING

Prepared for:

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES AND TOXIC SUBSTANCES
EXPOSURE EVALUATION DIVISION
Task No. 3-2
Contract No. 68023970
Project Officer: Russell Kinerson
Task Manager: Loren Hall

Prepared by:

GENERAL SCIENCES CORPORATION
8401 Corporate Drive
Landover, Maryland 20785

Submitted: December 1, 1986

GEMS> I

ELIZABETH COAL GAS SITE #2
LATITUDE 40:39:29 LONGITUDE 74:12:32 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	4797	8966	35819	59644	65170	121818	296214
RING TOTALS	4797	8966	35819	59644	65170	121818	296214

GEMS> I

ELIZABETH COAL GAS SITE #2
LATITUDE 40:39:29 LONGITUDE 74:12:32 1980 HOUSING

KM	0.00-.400	.400-.810	.810-1.60	1.60-3.20	3.20-4.80	4.80-6.40	SECTOR TOTALS
S 1	1679	3162	13044	22572	23135	42760	106352
RING TOTALS	1679	3162	13044	22572	23135	42760	106352

	1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
POPULATION	4,797	13,763	49,582	109,226	174,396	296,214
HOUSING	1,679	4,841	17,885	40,457	63,592	106,352

REFERENCE NO. 14

Elizabethtown Gas COMPANY
A SUBSIDIARY OF NATIONAL UTILITIES & INDUSTRIES
ONE ELIZABETHTOWN PLAZA • ELIZABETH, NEW JERSEY 07207 • (201) 289-5000

September 19, 1983

Hon. William D. Ruckleshaus
Administrator
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Mr. Ruckleshaus:

Pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, notice is hereby given of the potential existence of substances that may be "hazardous", within the definition reflected in 40 C.F.R. §300.6, on land owned now or in the past by the Elizabethtown Gas Company ("Elizabethtown").

Elizabethtown has become aware that facilities formerly used for the manufacture of low-Btu "town gas" from coal by the gas industry may, as a class, present hazardous waste questions. On August 22, 1983, Elizabethtown received from the New Jersey Department of Environmental Protection ("NJDEP") a request for information on eight properties, which are assumed to be former gas manufacturing facilities, including a designation of the operations thereon and the waste disposal methods utilized at the plants. We understand that NJDEP sent letters requesting information on other similar sites to other New Jersey gas utilities.

Our information at this point is very incomplete and we are gathering more, in cooperation with NJDEP. Activity at some of the sites stopped over 80 years ago and some data may be unavailable. In some cases we do not even know whether coal gasification processes were ever carried on at the site. In several cases, previous owners conducted any activities that may have occurred. In at least four cases Elizabethtown purchased the natural gas properties, directly or indirectly from Jersey Central Power & Light Company ("JCPL").

The sites, together with brief descriptions of coal gasification and related activity, if any, and ownership status, are as follows:

A. Gasification Facilities Formerly Operated and Property Now Owned by Elizabethtown:

NJD980728157 ZIP CODE 07206

1. Erie Street, between Third Avenue and Florida Street, Elizabeth, NJ - Prior to 1911 coal gas was manufactured here by Elizabethtown or a predecessor. After 1911, gas was manufactured from oil ("water gas"). The plant was used regularly until mid-1950, at which time its use was limited to intermediate winter peak shaving purposes. Such use continued through the winter of 1970-71, and the plant was subsequently dismantled. Approximately half of the original site has been sold; Elizabethtown retains the other half, operating facilities that include a system dispatch center and winter peaking supplies (LNG and propane).

NJD982787338 ZIP CODE 07202

2. 406 South Street, Elizabeth, NJ - Not operated since approximately 1901. Prior to that time, there was a coal gasification facility operated by Elizabeth. One half still owned by Elizabethtown; one half condemned and taken for flood control project in 1974.

NJD982187346 ZIP CODE 08822

3. East Main Street, Flemington, NJ - Was operated as a coal gasification plant by Jersey Central Power and Light ("JCPL"), until 1947, at which time it was acquired by a predecessor of Elizabethtown. The plant was abandoned in 1951 with the advent of natural gas.

B. Gasification Facilities Never Operated by Elizabethtown But Property Now Owned by Elizabethtown:

NJD982187353 ZIP CODE 07860

4. Diller Avenue, Newton, NJ - Was operated by JCPL as a coal gasification plant, we believe. A subsequent owner, which was merged into Elizabethtown, operated an oil gasification facility. One half of site now owned by Elizabethtown; JCPL retains the remainder for an electric substation.

C. Gasification Facilities Formerly Operated by Elizabethtown But Property No Longer Owned by Elizabethtown:

NJD982187361 ZIP CODE 08861

5. Linden, Sadowski, Wisteria Streets, Perth Amboy, NJ - Was operated by Elizabethtown as coal gasification plant prior to 1923; no longer owned. A storage holder was removed and property sold to St. Demetrius Greek Orthodox Church in 1964.

NJD982187379 ZIP CODE 07063

6. Intersection Central, Hamilton and Irving Streets, Rahway, NJ - May have been operated as coal gasification plant prior to 1911 by Elizabethtown or a predecessor. No longer owned by Elizabethtown. The land was sold to the City of Rahway in 1972.

D. Uncertain Whether Gasification Facilities Operated Or By Whom; Property No Longer Owned by Elizabethtown:

NJD982187387 ZIP CODE 08560

7. S. Main Street at Ferry Street, Lambertville, NJ - No longer owned by Elizabethtown. Former site of gas storage facilities. Elizabethtown is currently not sure whether gasification activities ever occurred at this site. It is believed there were no gasification activities after 1912. The storage holder was removed and property sold to Econotech Development Corporation of Bridge and Union Streets, Lambertville, in 1978.

NJD982187395 ZIP CODE 08865

8. Heckman Terrace, Phillipsburg, NJ - Owned by Elizabethtown until 1972, formerly owned by JCPL; Elizabethtown does not believe the site ever was the scene of coal gasification processes though it was a storage area. Was sold in 1972 to Mc Ginley Mills Inc.

E. Gasification Facilities Never Operated by Elizabethtown; Property Never Owned by Elizabethtown:

9. S. Lincoln Street, Washington, DC - May have been a coal gasification site for JCPL or a predecessor around 1870; Elizabethtown and its predecessors never owned this site but a report was made to New Jersey's Board of Public Utilities because the property is within our francise area.

With the exception of number 8, the NJDEP letter referenced all of the sites listed in A through E.

At this point, we have no information concerning the quantity of wastes, if any, that were deposited on these sites. Additionally, we still lack chemical information as to what particular substances may remain at each site. Generically, coal tars were a by-product of coal gas production and purification operations. We do have records of sales of these coal tars to other companies, including Public Service Electric & Gas Company over many years. We assume, thought, that some coal tars have been deposited on some of the sites listed, either by Elizabethtown (or its predecessors) or by Jersey Central Power & Light (or its predecessors) and that some coal tar constituents persist on at least some sites.

We are engaged in a thorough search of corporate and other records to determine what activities took place at what locations on these sites. We shall also retain such outside consulting help as may be needed to assist in chemical and engineering evaluation.

Very truly yours,

RFJr:B

Russell Fleming, Jr.
Executive Vice President
and General Counsel

cc: Hon. Robert E. Hughey, Commissioner
New Jersey Department of Environmental Protection

Jacqueline E. Schafer
Administrator, U.S. EPA Region II
26 Federal Plaza
Room 900
New York, NY 10278

Robert Brokaw, Esq.
Jersey Central Power & Light Co.

REFERENCE NO. 15

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9004-37	5-22-90	0925

DISTRIBUTION: Elizabeth Coal Gas Site #1

BETWEEN:	OF:	PHONE:
RAY ZWARYCZ	CITY OF ELIZABETH PUBLIC WORKS DEPT. ENGINEERING DEPT.	(201) 820-4270

AND: RICHARD SETTINO

DISCUSSION: (NUS)

I asked Mr. Zwaryczy for Storm Drain information in Elizabeth. He told me that the storm drains in the area do not drain to surface water. Elizabeth has combined sanitary and storm sewers. He said storm water would run off to various catch basins which would send the water to the Pump Station which would then pump it to the Joint Meeting where it would be treated.

ACTION ITEMS:

US 067 REVISED 0685

REFERENCE NO. 16

SUBJECT TO REVISION

WATER WITHDRAWAL POINTS AND NJGS CASE INDEX SITES WITHIN 5.0 MILES OF:

LATITUDE 403823
LONGITUDE 741236

DRAFT

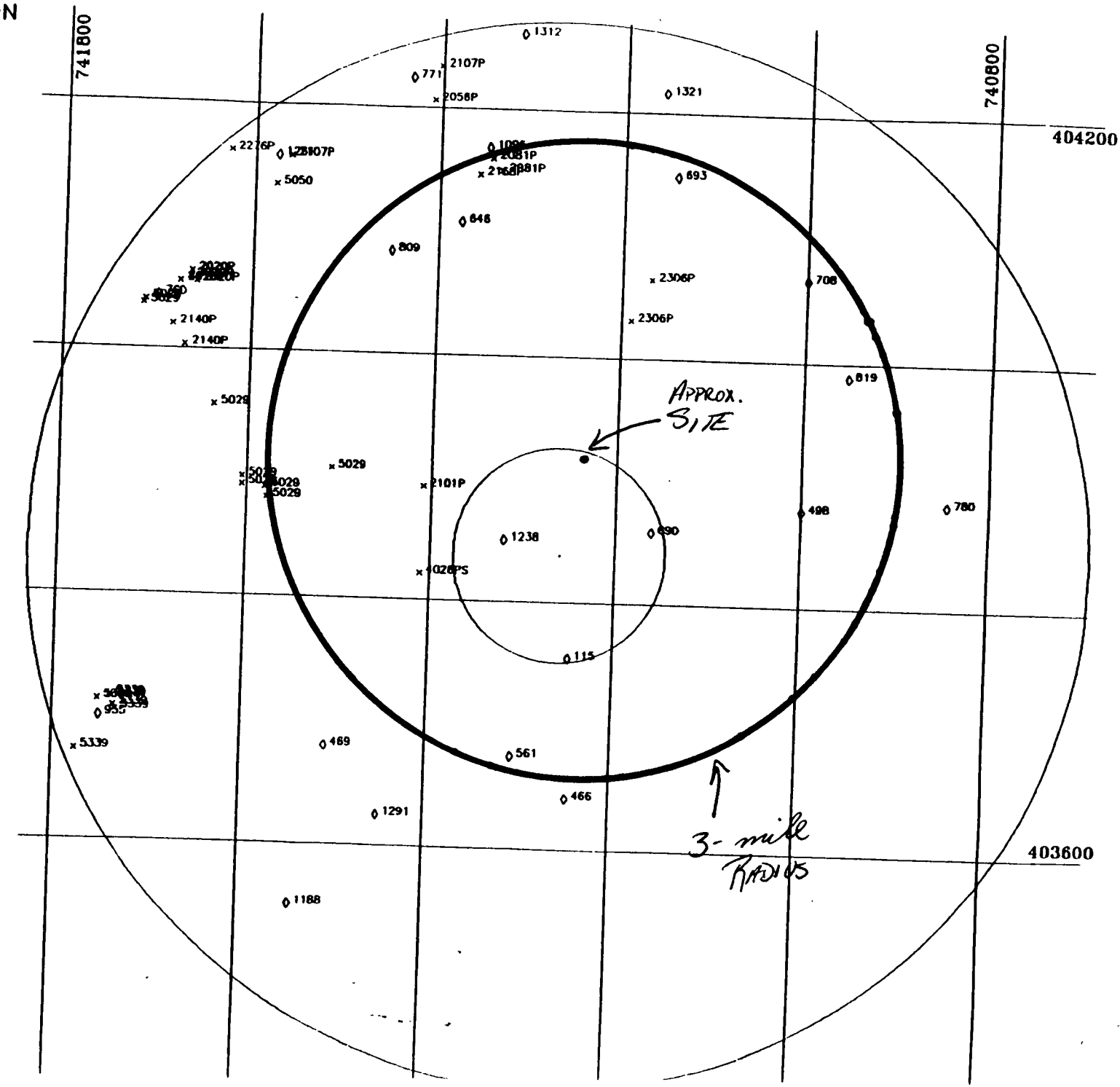
SCALE: 1:63,360
(3/4 inch = 1 Mile)

× WATER WITHDRAWAL POINTS
◊ NJGS CASE INDEX SITES
1 MILE AND 5 MILE RADII INDICATED

NJGS CASE INDEX DATA RETRIEVED FROM:
NEW JERSEY GEOLOGICAL SURVEY
ON 12/22/87

PLOT PRODUCED BY:
NJDEP
DIVISION OF WATER RESOURCES
BUREAU OF WATER ALLOCATION
CN-029
TRENTON, NJ 08625

DATE: 06/25/88



SUBJECT TO REVISION

* -- Water withdrawl points within 3-miles of Elizabeth Coal Gas Site #2

Page 1 of PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN 5.0 MI [illegible]

NUMBER	NAME	SOURCEID	SECID	LAT	LON	LEAD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5339	RAHWAY, CITY OF	2600795		403944	741245		4.9	39	17	318	GTRB	400
5339	RAHWAY, CITY OF	2600724	1	403939	741221		4.9	39	13	76	GTRB	250
5339	RAHWAY, CITY OF	2600781	1	403910	741223		4.9	39	17	300.5	GLCD	192
5339	RAHWAY, CITY OF	2600730		403907	741221		4.9	39	13	51.5	GLCD	200
5339	RAHWAY, CITY OF	2601671	4	403905	741221		4.9	39	13	127	GTRB	400
5339	RAHWAY, CITY OF	2601672	5	403903	741220		4.9	39	13	125	GTRB	400
5029	ELIZABETHTOWN WATER COMPANY	4600015	[illegible]	404022	741709	F	4.6	39	09	400	GTRB	250
5029	ELIZABETHTOWN WATER COMPANY	4600014	[illegible]	404024	741706	F	4.6	39	09	500	GTRB	250
2140P	ROTARY PEN CORPORATION	2602601	1	404012	741650		4.5	39	08	405	GTRB	90
2020P	SCHERING CORPORATION	2605849	5	404033	741646		4.4	39	08	500	GTRB	152
2140P	ROTARY PEN CORPORATION	2602831		404002	741642		4.4	39	08	402	GTRB	107
2020P	SCHERING CORPORATION	4600076		404035	741640	H	4.4	39	06	467	GTRB	460
2020P	SCHERING CORPORATION	2600438	1	404035	741640	H	4.4	39	08	405	GTRB	400
2020P	SCHERING CORPORATION	2600075	2	404038	741639		4.4	39	08	398	GTRB	400
2020P	SCHERING CORPORATION	2605532	4A	404033	741636		4.3	39	08	550	GTRB	450
5029	ELIZABETHTOWN WATER COMPANY	3601696	FIRST AVE	403933	741622	F	3.6	39	14	509	GTRB	450
2276P	SCHERING CORP.	4600145	2	404137	741616	F	4.9	39	19	676	GTRB	260
5029	ELIZABETHTOWN WATER COMPANY	2602302	WALNEBURGA	403854	741603	F	3.1	39	14	350	GTRB	350
5029	ELIZABETHTOWN WATER COMPANY	2602412	WALNEBURGA	403858	741601	F	3.1	39	14	321	GTRB	320
5029	ELIZABETHTOWN WATER COMPANY	2602463	WALNEBURGA	403853	741548	F	2.9	39	14	325	GTRB	400
5029	ELIZABETHTOWN WATER COMPANY	2602360	WALNEBURGA	403848	741547	F	2.8	39	14	248	GTRB	300
5050	ELIZABETHTOWN WATER COMPANY	4600016	1	404121	741546		4.4	39	19	[illegible]	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600017	3A	404121	741546		4.4	39	19	143	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600018	2A	404121	741546		4.4	39	19	130	GTRB	150
5050	ELIZABETHTOWN WATER COMPANY	4600019	3	404121	741546		4.4	39	19	90	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600020	3A	404121	741546		4.4	39	19	129	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600021	4A	404121	741546		4.4	39	19	125	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600022	5	404121	741546		4.4	39	19	91	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600023	5A	404121	741546		4.4	39	19	128	GTRB	150
5050	ELIZABETHTOWN WATER COMPANY	4600024	6A	404121	741546		4.4	39	19	130	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600025	7	404121	741546		4.4	39	19	72A	GTRB	150
5050	ELIZABETHTOWN WATER COMPANY	4600026	8A	404121	741546		4.4	39	19	125	GTRB	250
5050	ELIZABETHTOWN WATER COMPANY	4600027	9A	404121	741546		4.4	39	19	125	GTRB	250
5050	ELIZABETHTOWN WATER COMPANY	4600028	10	404121	741546		4.4	39	19	87	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600029	[illegible]	404121	741546		4.4	39	19	116	GTRB	150
5050	ELIZABETHTOWN WATER COMPANY	4600030	11	404121	741546		4.4	39	19	125	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600031	12	404121	741546		4.4	39	19	122	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600032		404121	741546		4.4	39	19	111	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	4600033	19	404121	741546		4.4	39	19		GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600034	20	404121	741546		4.4	39	19	117	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600035	21	404121	741546		4.4	39	19	440	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600036	22	404121	741546		4.4	39	19	96	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600037	23	404121	741546		4.4	39	19	106	GTRB	100
5050	ELIZABETHTOWN WATER COMPANY	4600038	24	404121	741546		4.4	39	19	97	GTRB	150
5050	ELIZABETHTOWN WATER COMPANY	2604808	[illegible]	404121	741546		4.4	39	19	78	GTRB	170
5050	ELIZABETHTOWN WATER COMPANY	2604829	[illegible]	404121	741546		4.4	39	19	110	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	2604830	[illegible]	404121	741546		4.4	39	19	100	GTRB	200
5050	ELIZABETHTOWN WATER COMPANY	2604920	[illegible]	404121	741546		4.4	39	19	117	GTRB	400
2107P	TUSCAN DAIRY FARMS INC	2604407	1	404121	741546		4.4	39	19	200	GTRB	400
* 5029	ELIZABETHTOWN WATER COMPANY	2600793	[illegible]	403[illegible]	[illegible]	F	[illegible]	39	14	350	GTRB	350
* 4026PS	EXXON COMPANY USA	[illegible]	[illegible]	[illegible]	[illegible]	F	[illegible]	39	7		SY	—
3056P	ATLAS TOOL COMPANY, INC.	3601[illegible]		[illegible]	[illegible]		4.1	39	0	[illegible]	GTRB	20
3056P	ATLAS TOOL COMPANY, INC.	2601[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	GTRB	—
* 2101P	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	GTRB	

*- Water withdrawl points within 3 mile radius of Elizabeth Coal Gas Site #2

Page 2 of PRELIMINARY SURVEY OF WATER WITHDRAWAL POINTS WITHIN [illegible] MINUTES OF 4078[illegible] LAT. [illegible] LON. (IN ORDER BY DECREASING LONG [illegible]

	NUMBER	NAME	SOURCEID	LOCID	LAT	LON	LLACC	DISTANCE	COUNTY	MUN	DEPTH	GEO1	GEO2	CAPACITY
*	2168P	SECUR-IMAGE TECHNOLOGIES INC.	2603615	2	[illegible]	741[illegible]		3.6	[illegible]	07	461	GTRB		[illegible]
*	2081P	CERTIFIED PROCESSING CORP.	460094	1	404[illegible]6	741[illegible]	F	3.0	21	07	202	GTRB		100
*	2081P	CERTIFIED PROCESSING CORP.	2604624	[illegible]	404[illegible]	741[illegible]	F	[illegible]	21	07	250	GTRB		
*	2081P	CERTIFIED PROCESSING CORP.	2600265	[illegible]	404[illegible]0	741[illegible]0	F	3.6	21	0	630	GTRB		250
*	2706P	HAYWARD MANUFACTURING PRODUCTS	2604712	1	404019	741154		[illegible]	[illegible]	1[illegible]	[illegible]74	GTRB		100
*	2706P	HAYWARD MANUFACTURING PRODUCTS	260[illegible]	2	[illegible]	741[illegible]		[illegible]	[illegible]	1[illegible]	[illegible]75	GTRB		100

Number of Observations: 62

REFERENCE NO. 17

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.: 02-9004-38

DATE: 5-7-90

TIME: 0945

DISTRIBUTION

Elizabeth Coal Gas Site #2

BETWEEN: Tony Martin

OF: Secur-Image Technologies, Inc.

PHONE: (201) 352-1944

AND: RICHARD SETTINO (NUS)

DISCUSSION

I asked Mr. Martin about the well located on the property. He said the well was previously for industrial use but has since been capped.

ACTION ITEMS:

REFERENCE NO. 18

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.: 02-9004-38

DATE: 5-7-90

TIME: 0948

DISTRIBUTION

Elizabeth Coal Gas Site #2

BETWEEN: Pat Iacono

OF: Certified Processing Corp.

PHONE: (201) 923-5200

AND: RICHARD SETTINO

DISCUSSION (NUS)

I asked Mr. Iacono about the usage of the three wells located on the property. He told me that all three wells are used to supply cooling water only and are not used as a potable source.

ACTION ITEMS:

REFERENCE NO. 19

NUS CORPORATION

02-8912-06

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8912-06	2/14/90	1415

DISTRIBUTION:

REICHHOLD CHEMICAL INC.

BETWEEN:	OF:	PHONE:
RICHARD A. SADOWSKI	ELIZABETHTOWN WATER CO.	(201) 654-1234

AND:

W. S. FOSS

DISCUSSION: (NUS)

I asked Mr Sadowski if there are any potable or groundwater wells in service within a 3-mile radius of Reichhold Chemical Inc. He informed that any wells located within 3 miles are out of service and are not being used. I inquired about the existence of any surface water intakes. He said there are none that exist.

ACTION ITEMS:

NUS 087 REVISED 0881

REFERENCE NO. 20

NUS CORPORATION

0013-C
02-8912-

TELECON NOTE

CONTROL NO: 02-8912-06

DATE: 2/14/90

TIME: 1430

DISTRIBUTION:

REICHHOLD CHEMICAL, INC.

BETWEEN: JOAN MORAN

OF: CITY OF ELIZABETH WATER UTILITY

PHONE: (201) 820-4265

AND: W.J. FOSS

DISCUSSION:

(NUS)

I asked if there were any ground water wells used as a potable water supply. Ms. Moran informed there are no wells used for a potable water supply. They buy water from Elizabethtown Water Co. and the City of Newark Water Department. I also asked about any surface water intakes under their ~~jurisdiction~~ management. She said there are no surface intakes under their management.

ACTION ITEMS:

NUS 067 REVISED 0591

REFERENCE NO. 21

0014 - C
C2-8912-06

NUS CORPORATION

TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8912-06	3/9/90	0950

DISTRIBUTION:

REICHHOLD CHEMICAL INC.

BETWEEN: JONHAILA

OF: HAYWARD INDUSTRIES

PHONE: ( ) 351-5460

AND: W. FOSS

DISCUSSION: (NUS)

Mr Haila informed me that there are two groundwater wells located on the property of Hayward Industries. Water is pumped from the ground and is used for cooling purposes. The water is then pumped back into the ground in the vicinity of the wells to recharge the wells. This water is not used as a potable water supply.

ACTION ITEMS:

NUS 067 REVISED 0891

REFERENCE NO. 22

002C
02-9004-37

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO..	DATE:	TIME:
02-9004-37	5/1/90	1510

DISTRIBUTION:

ELIZABETH COAL GAS SITE #1

BETWEEN.	OF.	PHONE:
LISA BALBOA	CITY OF ELIZABETH WATER DEPARTMENT	(201) 820-4120

AND.

RICHARD SETTINO (NUS)

DISCUSSION:

I asked Ms. Balboa where Elizabeth gets its water for public supply. She told me that Elizabeth buys its water from the Elizabethtown Water Company and the Newark Water Company.

ACTION ITEMS:

NUS 067 REVISED 0685

REFERENCE NO. 23

0008 C
02-9004-37

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9004-37	5-10-90	1410

DISTRIBUTION:

ELIZABETH COAL GAS SITE #1

BETWEEN:	OF:	PHONE:
JOHN TARASUK	CITY OF NEWARK WATER DEPARTMENT	(201) 256-4965

AND:

RICHARD SETTINO (NUS)

DISCUSSION:

I asked ~~the~~ Mr. Tarasuk where the Water Dept. got its water from. He told me that the Dept. was in charge of the Pequanock Water Shed. They possessed 5 reservoirs which supply approximately 60 million gallons of water per day to Newark and surrounding communities.

ACTION ITEMS:

NUS 067 REVISED 0685

REFERENCE NO. 24

0007C
02-9004-

NUS CORPORATION AND SUBSIDIARIES

TELECON NOTE

CONTROL NO.:	DATE:	TIME:
02-9004-37	5-10-90	1340

DISTRIBUTION:

ELIZABETH COAL GAS SITE #1

BETWEEN:	OF:	PHONE:
Arlene Potts	ELIZABETHTOWN WATER COMPANY	(201) 654-1234

AND: RICHARD SETTINO

DISCUSSION: (NUS)

I asked Ms. Potts where Elizabethtown Water Company gets its water. She told me that ~~all~~ they receive their water from the Raritan River. I also ~~also~~ asked where the intakes were located. She told me they are located in Bridgewater.

ACTION ITEMS:

NUS 067 REVISED 0685

REFERENCE NO. 25

Date: _____
Company
By: _____
Date: _____
Contractor
By: _____
Date: _____

FR Doc. 84-1432 Filed 1-23-84; 8:45 am
BILLING CODE 6560-50-M

[OW-FRL-2460-3]

Brunswick Shale and Sandstone Aquifer of the Ridgewood Area, New Jersey; Final Determination

AGENCY: U.S. Environmental Protection Agency.

ACTION: Notice.

SUMMARY: Pursuant to Section 1424(e) of the Safe Drinking Water Act, the Administrator of the U.S. Environmental Protection Agency (EPA), has determined that the Brunswick Shale and Sandstone Aquifer, underlying the Ridgewood Area, is the sole or principal source of drinking water for Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey, and that the aquifer, if contaminated, would create a significant hazard to public health. As a result of this action, Federal financially assisted projects constructed in the Ridgewood Area and its streamflow source zone (upstream portions of Ho Ho Kus Brook and Saddle River Run drainage basins) will be subject to EPA review to ensure that these projects are designed and constructed so that they do not create a significant hazard to public health.

ADDRESSES: The data on which these findings are based are available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Water Supply Branch, 26 Federal Plaza, New York, New York 10278.

FOR FURTHER INFORMATION CONTACT: Damina J. Duda, Water Supply Branch, 26 Federal Plaza, New York, New York 10278 (212) 264-1800.

SUPPLEMENTARY INFORMATION: Notice is hereby given that pursuant to Section 1424(e) of the Safe Drinking Water Act (42 U.S.C. 300f, 300h-3(e), Pub. L. 93-523), the Administrator of the U.S. Environmental Protection Agency (EPA) has determined that the Brunswick Shale and Sandstone aquifer of the Ridgewood Area is the sole or principal source of drinking water for Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey. Pursuant to Section 1424(e), Federal financially assisted projects constructed in the Ridgewood Area and its streamflow source zone (upstream portions of Ho Ho Kus Brook, and

Saddle River Run drainage basins) will be subject to EPA review.

I. Background

Section 1424(e) of the Safe Drinking Water Act states:

(e) If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

On July 4, 1979, the Committee to keep Our Water Pure petitioned EPA to designate the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area as sole source aquifer. On January 15, 1980, EPA published a notice in the Federal Register announcing a public comment period and setting a public hearing date. A public hearing was conducted on February 28, 1981, and the public was allowed to submit comments on the petition until March 28, 1980.

II. Basis for Determination

Among the factors to be considered by the Administrator in connection with the designation of an aquifer under Section 1424(e) are: (1) Whether the aquifer is the area's sole or principal source of drinking water, and (2) whether contamination of the aquifer would create a significant hazard to public health.

On the basis of information available to this Agency, the Administrator has made the following findings, which are the basis for the determination noted above:

1. The Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is the "sole source" of drinking water for the approximately 68,820 residents of Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey.

2. There is no existing alternative drinking water source or combination of sources which provides fifty percent or more of the drinking water to the designated area.

3. The Brunswick formation is a soft red shale interbedded with coarse grained sandstone. The aquifer is overlain by permeable unconsolidated glacial and recent deposits. As a result of permeable soil characteristics, the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is highly susceptible to contamination through its recharge zone from a number of sources, including but not limited to, chemical spills, leachate from landfills, stormwater runoff, highway deicers, faulty septic systems, wastewater treatment systems, and waste disposal lagoons. The aquifer is also susceptible to contamination to a lesser degree from the same sources, through its streamflow source zone. Since ground water contamination can be difficult or impossible to reverse and since the aquifer in this area is solely relied upon for drinking water purposes by the population of the Ridgewood Area, contamination of the aquifer could pose a significant hazard to public health.

III. Description of the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area, Its Recharge Zone and Its Streamflow Source Zone

The Brunswick Shale and Sandstone Aquifer is a soft red shale interbedded with coarse grained sandstone. The formation, located in northern New Jersey, is fairly large, extending south into Pennsylvania and north into New York. Igneous intrusions which form the Watchung Mountains and the Palisades also form the western and eastern boundaries of the Brunswick formation, respectively. The area in which Federal financially assisted projects will be subject to review is the portion of the Brunswick Shale and Sandstone Aquifer in the Ridgewood Area, its streamflow source zone, and its recharge zone.

For the purposes of this designation, the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area is considered to include the entire municipalities of Ridgewood, Midland Park, Glen Rock, and Wyckoff, New Jersey. Its recharge zone is considered to be one and the same with this area. The streamflow source zone is that portion of the drainage basins of Ho Ho Kus Brook and Saddle River Run located upstream of the Ridgewood area. This includes all or a portion of the following New Jersey municipalities: Waldwick, Allendale, Ramsey, Manwan, Franklin Lakes, Ho Ho Kus, Saddle River, Upper Saddle River, Woodcliff Lake, Hillside, Washington, Montvale, as well as Ramapo Township, New York.

IV. Information Utilized in Determination

The information utilized in this determination includes the petition, written and verbal comments submitted by the public and various technical publications. The above data is available to the public and may be inspected during normal business hours at the U.S. Environmental Protection Agency, Region II, Water Supply Branch, 26 Federal Plaza, New York, New York 10278.

V. Project Review

EPA Region II is working with the Federal agencies that may in the future provide financial assistance to projects in the area of concern. Interagency procedures have been developed through which EPA will be notified of proposed commitments by Federal agencies for projects which could contaminate the Brunswick Shale and Sandstone Aquifer, upon which the Ridgewood Area is dependent for its sole source water supply. EPA will evaluate such projects and, where necessary, conduct an in-depth review, including soliciting public comments where appropriate. Should the Administrator determine that a project may contaminate the aquifer through its recharge zone so as to create a significant hazard to public health, no commitment for Federal financial assistance may be entered into. However, a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

Although the project review process cannot be delegated, the U.S. Environmental Protection Agency will rely to the maximum extent possible on any existing or future State and local control mechanisms in protecting the ground water quality of the Brunswick Shale and Sandstone Aquifer on which the Ridgewood Area is dependent for its sole source water supply. Included in the review of any Federal financially assisted project will be coordination with the State and local agencies. Their comments will be given full consideration and the Federal review process will attempt to complement and support State and local ground water protection mechanisms.

VI. Summary and Discussion of Public Comments

Most comments were generally in favor of designation. Two local governments submitted resolutions in support of designation. Only two commenters expressed any reservations regarding the designation.

One commenter expressed concern that the proposed designation would provide protection which is duplicative of State and local controls and may lead to unnecessary bureaucratic delays of

projects. Although a number of ground water protection measures are available at the Federal, State and local level, none of these, either, individually or collectively, permit EPA to act as directly as would a sole source designation in the review and approval of Federal financially assisted projects. In addition, EPA feels that the sole source project review process will foster integration rather than duplication of environmental review efforts. Memoranda of Understanding have been negotiated with various Federal agencies, with the purpose of streamlining the review process and minimizing project delays.

One commenter expressed concern that the area proposed for sole source designation could be an arbitrary political subdivision of the larger Brunswick aquifer system. The commenter questioned whether sufficient consideration had been given to the physical limits of the hydrologic system. The EPA recognizes that the aquifer does indeed cover a large area. However, a significant portion of the population in these other areas utilize other sources of water supply or have alternative sources available.

Concern was also raised that the Ridgewood Area may have alternative water supply available through adjacent water purveyors; specifically, the Passaic Valley Water Commission or the Hackensack Water Company. EPA has reviewed this matter and determined that either insufficient supply is currently available (in one case) or interconnections between the Ridgewood Area and the purveyor are currently not adequate to handle the Area's demand. Furthermore, the Brunswick Shale and Sandstone Aquifer in the Ridgewood Area is a source of water for export to adjacent purveyors during drought conditions.

The area considered for designation was determined to meet the criteria of an area which depends upon an aquifer for its sole or principal drinking water source and which, if contaminated, would pose a serious threat to the health of the Ridgewood Area residents.

VII. Economic and Regulatory Impact

Pursuant to the provisions of the Regulatory Flexibility Act (RFA), 5 U.S.C. 605(b), I hereby certify that the attached rule will not have a significant impact on a substantial number of small entities. For purposes of this Certification the "small entity" shall have the same meaning as given in Section 601 of the RFA. This action is only applicable to the Ridgewood Area.

The only affected entities will be those Area-based businesses, organizations or governmental jurisdictions that request Federal financial assistance for projects which have the potential for contaminating the aquifer so as to create a significant hazard to public health. EPA does not expect to be reviewing small isolated commitments of financial assistance on an individual basis, unless a cumulative impact on the aquifer is anticipated; accordingly, the number of affected small entities will be minimal.

For those small entities which are subject to review, the impact to today's action will not be significant. Most projects subject to this review will be proceeded by a ground water impact assessment required pursuant to other Federal laws, such as the National Environmental Policy Act, as amended (NEPA), 42 U.S.C. 4321, et seq. Integration of those related review procedures with sole source aquifer review will allow EPA and other Federal agencies to avoid delay or duplication of effort in approving financial assistance, thus minimizing any adverse effect on those small entities which are affected. Finally, today's action does not prevent grants of Federal financial assistance which may be available to any affected small entity in order to pay for the redesign of the project to assure protection of the aquifer.

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This regulation is not major because it will not have an annual effect of $100 million or more on the economy, will not cause any major increase in costs or prices, and will not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States enterprises to compete in domestic or export markets. Today's action only affects the Brunswick Shale and Sandstone Aquifer of the Ridgewood Area. It provides an additional review of ground-water protection measures, incorporating State and local measures whenever possible, for only those projects which request Federal financial assistance.

Dated: January 12, 1983.

William D. Ruckelshaus,
Administrator.

[FR Doc. 84-1607 Filed 1-23-84; 8:45 am]
BILLING CODE 6560-50-M

REFERENCE NO. 26

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9004-38	6/6/90	09:35

DISTRIBUTION:

- Elizabeth Coal Gas Site No. 2 file (COR)
- R. Settino

BETWEEN:	OF:	PHONE:
Dan Bernier	Engineer, Union City. Parks & Rec.	(201) 527-4814

AND: Thomas Varner (NUS)

DISCUSSION:

I explained that NUS was conducting a site inspection of a site formerly owned by Elizabethtown Gas for the U.S. EPA. I explained where the property was located. DB told me he spoke for a long time with Ken Knutzen yesterday. He said he knows where the property is, and that he was aware it may be contaminated. He said an executive from Elizabethtown Gas had said there may be coal tar buried there. DB said that Elizabethtown Gas had done some cleanup reportedly, but that would have to have been a long time ago. DB said that the Union City property was greatly disrupted when the flood control project was implemented. He said a lot of soil was added or removed in different areas in order to build berms or backfill behind the concrete flume. He said the property level was lowered to act as a basin should flooding occur, which he said has not happened recently but probably did often in the past. I told him I was sure if I was talking with the right

ACTION ITEMS:

NUS 067 REVISED 0685

over →

County office, but I was trying to find out who to obtain permission from for access to the property. I told him there had been some question as to who maintained the County property. I told him I had spoken to Nate Fennel who had told me that Parks Maintenance does maintain that property. DB told me I had the right office; they are the administrative offices of Parks and Recreation. Thomas Nolan is the Director of Parks & Recreation, Charlie Dalbene is Director of Parks Maintenance. DB said I should send a copy of the letter I sent to Mr. Frioletti to Thomas Nolan. He said there should be no problem as far as access is concerned.

Their address is:

County of Union
Dept. of Parks and Recreation
Administrative Building
Elizabeth, N.J. 07204

Attn: Thomas L. Nolan, Director

TAV 6/7/90

REFERENCE NO. 27

- COPY OF CLP DATA

(REDLINED AND MARKED)

- COMPUTER QA'd PRINTOUT

SITE NAME: Elizabeth Coal Gas Site #2

CASE# AND/OR SAS#: 14272

BRICS#: NJGA

TDD#: 02-9004-38

SAMPLING TRIP REPORT

SITE NAME:	Elizabeth Coal Gas Site #2
TDD NO.:	02-9004-38
SAMPLING DATE:	June 12, 1990
EPA CASE NO.:	14272

1. Site Location: Refer to Figure 1
2. Sample Locations: Refer to Figure 2
3. Sample Descriptions Refer to Table 1
4. Laboratories Receiving Samples:

Sample Type	Name and Address of Laboratory
Organic	Environmental Control Technology Corp. 3985 Research Park Drive Ann Arbor, MI 48108
Inorganic	Betz Laboratories, Inc. 4636 Somerton Road Trevose, PA 19047

5. Sample Dispatch Data:

A total of 3 aqueous and 14 soil samples for organic analysis were shipped by NUS Corporation FIT 2 personnel via Federal Express under Airbill No. 7211186194 to Environmental Control Technology Corporation on June 12, 1990 at approximately 1810 hours.

A total of 3 aqueous and 14 soil samples for inorganic analysis were shipped by NUS Corporation FIT 2 personnel via Federal Express under Airbill No. 7211185741 to Betz Laboratories, Inc. on June 12, 1990 at approximately 1810 hours.

6. On-Site Personnel:

Name	Organization	Duties on Site
Rich Settino	NUS Corporation, FIT 2	Site Manager, Written and Photographic Documentation
Tom Varner	NUS Corporation, FIT 2	Site Safety Officer
Bob Yaeger	NUS Corporation, FIT 2	Sample Management Officer
Angie Perez	NUS Corporation, FIT 2	Sampler
Bob Kurkjian	NUS Corporation, FIT 2	Sampler

7. Weather Conditions:

Clear, sunny, temperature 70°- 75°F, winds ranging from 5 to 10 mph from the northeast.

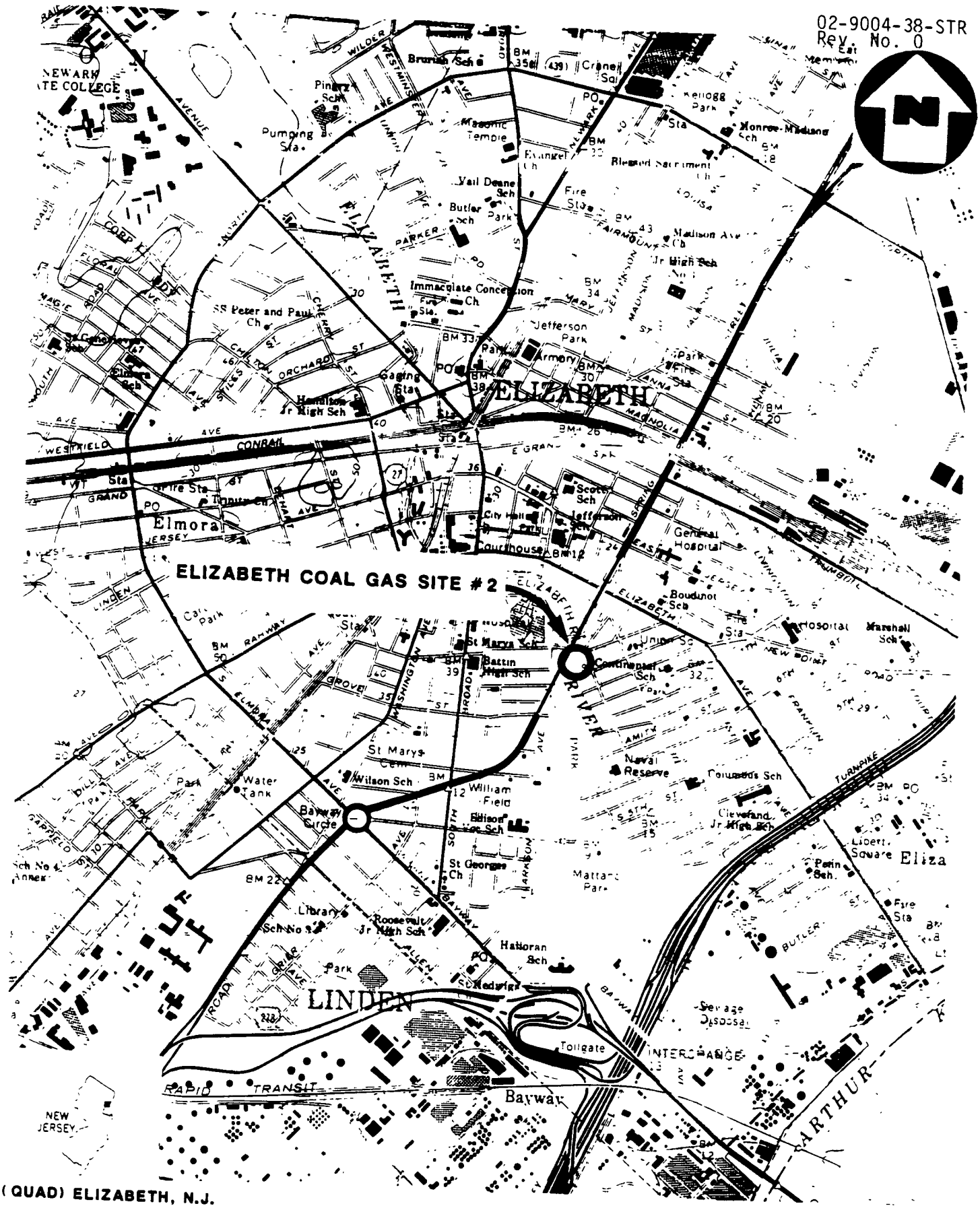
8. Additional Comments:

All samples will be analyzed for Target Compound List (TCL) organic and inorganic compounds, including cyanide.

9. Report Prepared By: Richard Settino Date: June 22, 1990

10. Approved By: Charles [illegible] Date: 6/29/90

02-9004-38-STR
Rev. No. 0



(QUAD) ELIZABETH, N.J.

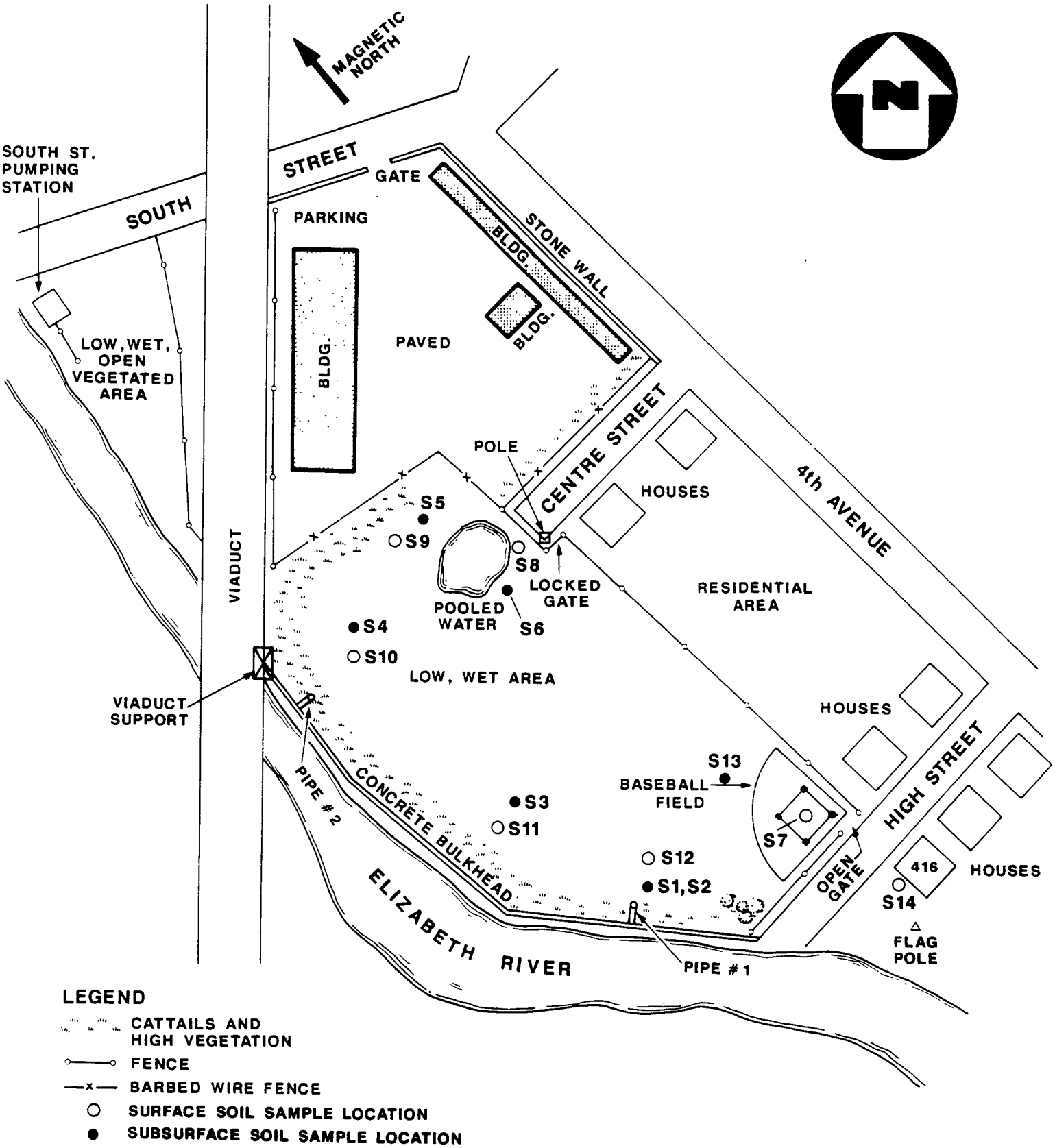
SITE LOCATION MAP

ELIZABETH COAL GAS SITE #2, ELIZABETH, N.J.

SCALE: 1" = 2000'

FIGURE 1

NUS CORPORATION



SAMPLE LOCATION MAP

ELIZABETH COAL GAS SITE #2, ELIZABETH, N.J.

NOT TO SCALE

FIGURE 2

NUS CORPORATION

TABLE I
SAMPLE DESCRIPTIONS
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
CASE NO. 14272

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJGA-S1	BDN53	MBCN25	1209	Soil	Subsurface soil sample, located at a bearing of 52° from concrete sewer pipe No. 1, at a bearing of 221° from the street light pole at the south corner of Centre Street, and at a bearing of 318° from the southwest corner of High Street, collected from a depth of 24 to 36 inches.
NJGA-S2**	BDN54	MBCN26	1219	Soil	Same location as NJGA-S1.
NJGA-S3	BDN55	MBCY72	1307	Soil	Subsurface soil sample, located at a bearing of 17° from concrete sewer pipe No. 1, at a bearing of 141° from concrete sewer pipe No. 2, and at a bearing of 246° from the street light pole at the south corner of Centre Street, collected from a depth of 12 to 24 inches.
NJGA-S4	BDN56	MBCY73	1355	Soil	Subsurface soil sample, located at a bearing of 52° from concrete sewer pipe No. 2, at a bearing of 126° from the intersection of the concrete bulkhead and the viaduct support, and at a bearing of 286° from the street light pole at the south corner of Centre Street, collected from a depth of 30 to 40 inches.

**Duplicate - Indicates that a sample was collected as an environmental duplicate.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
CASE NO. 14272

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJGA-S5	BDN57	MBCY74	1416	Soil	Subsurface soil sample, located at a bearing of 306° from the street light pole at the south corner of Centre Street, at a bearing of 63° from concrete sewer pipe No. 2, and at a bearing of 20° from concrete sewer pipe No. 1, collected from a depth of 18 to 30 inches.
NJGA-S6	BDN58	MBCY75	1454	Soil	Subsurface soil sample, located at a bearing of 280° from the street light pole at the south corner of Centre Street, at a bearing of 33° from concrete sewer pipe No. 1, and at a bearing of 94° from concrete sewer pipe No. 2, collected from a depth of 36 to 48 inches.
NJGA-S7*	BDN59	MBCY76	1628	Soil	Surface soil sample, located at a bearing of 193° from the street light pole at the south corner of Centre Street, at a bearing of 124° from concrete sewer pipe No. 2, and at a bearing of 65° from concrete sewer pipe No. 1, collected from a depth of 0 to 6 inches.

*MS/MSD - Indicates that additional sample volume was collected and shipped to the laboratory for matrix spike (MS) and matrix spike duplicate (MSD) analysis.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
CASE NO. 14272

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJGA-S8	BDN60	MBCY77	1506	Soil	Surface soil sample, located at a bearing of 284° from the street light pole at the south corner of Centre Street, at a bearing of 34° from concrete sewer pipe No. 1, and at a bearing of 93° from concrete sewer pipe No. 2, collected from a depth of 0 to 6 inches.
NJGA-S9	BDN61	MBCY78	1429	Soil	Surface soil sample, located at a bearing of 65° from concrete sewer pipe No. 2, at a bearing of 15° from concrete sewer pipe No. 1, and at a bearing of 306° from the street light pole at the south corner of Centre Street, collected from a depth of 0 to 6 inches.
NJGA-S10	BDN62	MBCY79	1256	Soil	Surface soil sample, located at a bearing of 61° from concrete sewer pipe No. 2, at a bearing of 133° from the intersection of the concrete bulkhead and the viaduct support, and at a bearing of 330° from the street light pole at the south corner of Centre Street, collected from a depth of 0 to 6 inches.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
CASE NO. 14272

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Number	Collection Time	Sample Type	Sample Location
NJGA-S11	BDN63	MBCY80	1246	Soil	Surface soil sample, located at a bearing of 152° from concrete sewer pipe No. 2, at a bearing of 277° from concrete sewer pipe No. 1, and at a bearing of 250° from the street light pole at the south corner of Centre Street, collected from a depth of 0 to 6 inches.
NJGA-S12	BDN64	MBCY81	1551	Soil	Surface soil sample, located at a bearing of 44° from concrete sewer pipe No. 1, at a bearing of 158° from concrete sewer pipe No. 2, and at a bearing of 225° from the street light pole at the south corner of Centre Street, collected from a depth of 0 to 6 inches.
NJGA-S13	BDN65	MBCY82	1618	Soil	Subsurface soil sample, located at a bearing of 208° from the street light pole at the south corner of Centre Street, at a bearing of 53° from concrete sewer pipe No. 1, and at a bearing of 117° from concrete sewer pipe No. 2, collected from a depth of 36 to 48 inches.

TABLE I (Cont'd)
SAMPLE DESCRIPTIONS
ELIZABETH COAL GAS SITE #2
ELIZABETH, NEW JERSEY
CASE NO. 14272

NUS Sample Number	CLP Organic Sample Number	CLP Inorganic Sample Time	Collection Time	Sample Type	Sample Location
NJGA-S14	BDN66	MBCY83	1656	Soil	Surface soil sample, located at a bearing of 331° and a distance of 9 feet from the south corner of 416 High Street, and at a bearing of 10° and a distance of 13 feet from the flag pole located on the south side of 416 High Street, collected from a depth of 0 to 6 inches.
NJGA-RIN1	BDN69	MBCY86	1015	Aqueous Rinsate Blank	Bowl rinsate collected in the field.
NJGA-RIN2	BDN70	MBCY87	1045	Aqueous Rinsate Blank	Trowel rinsate collected in the field.
NJGA-RIN3	BDN71	MBCY88	1130	Aqueous Rinsate Blank	Auger rinsate collected in the field.

SITE NAME. ELIZABETH COAL GAS SITE #2
TDD#. 02-9004-38
SAMPLING DATE: 6/12/90
EPA CASE NO : 14272 LAB: ENCOT

VOLATILES																	
Sample ID No.	NJGA-S1	NJGA-S2(DUP)	NJGA S3	NJGA S4	NJGA-S5	NJGA-S6	NJGA S7(MS/MSD)	NJGA-S8	NJGA-S9	NJGA-S10	NJGA S11	NJGA-S12	NJGA-S13	NJGA-S14	NJGA-RIN1	NJGA RIN2	NJGA-RIN3
Traffic Report No	BDN52	BDN54	BDN55	BDN56	BDN57	BDN58	BDN59	BDN60	BDN61	BDN62	BDN63	BDN64	BDN65	BDN66	BDN69	BDN70	BDN71
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor	1	1	1	1	10(MEDI)	1	1	1	1	1	1	1	1	1	1	1	1
Percent Moisture	16	15	14	2	17	16	10	14	17	18	12	9	14	15	--	--	--
Chloromethane																	
Bromomethane																	
Vinyl Chloride																	
Chloroethane																	
Methylene Chloride																	
Acetone		150 E			R												
Carbon Disulfide	J	J			10000 E											BJ	
1,1-Dichloroethene																	
1,1-Dichloroethane																	
Trans-1,2-Dichloroethene (total)																	
Chloroform																	
1,2-Dichloroethane																	
2-Butanone																	
1,1,1-Trichloroethane					R											BJ	BJ
Carbon Tetrachloride																	
Vinyl Acetate																	
Bromodichloromethane																	
1,2-Dichloropropane																	
cis-1,3-Dichloropropene																	
Trichloroethene																	
Dibromochloromethane																	
1,1,2-Trichloroethane																	
Benzene				J	E2000 E		7	J	J								
trans-1,3-Dichloropropene																	
Bromoform																	
4-Methyl-2-Pentanone		J															
2-Hexanone																	
Tetrachloroethene																	
Toluene					5900 E												
1,1,2,2-Tetrachloroethane																	
Chlorobenzene																	
Ethylbenzene					J												
Styrene					14000 E												
Xylenes (Total)				25	6800 E												

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 the material
NR - analysis not required

SITE NAME: ELIZABETH COAL GAS SITE #2
TDD#: 02-9004-38
SAMPLING DATE 6/12/90
EPA CASE NO.: 14272 LAB: ENCOT

SEMI-VOLATILES																	
Sample ID No.	NJGA-S1	NJGA-S2(DUP)	NJGA-S3	NJGA-S4	NJGA-S5	NJGA-S6	NJGA-S7(MS,MSD)	NJGA-S8	NJGA-S9	NJGA-S10	NJGA-S11	NJGA-S12	NJGA-S13	NJGA-S14	NJGA-RIN1	NJGA-RIN2	NJGA-RIN3
Traffic Report No	BDN53	BDN54	BDN55	BDN56	BDN57	BDN58	BDN59	BDN60	BDN61	BDN62	BDN63	BDN64	BDN65	BDN66	BDN69	BDN70	BDN71
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1/Y	1/Y	1/Y	1/Y	10(MED)	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1	1	1
Percent Moisture	16	15	14	23	17	16	10	14	17	18	12	9	14	15	--	--	--
Phenol				J	J							R					
bis(2-Chloroethyl)ether												R					
2-Chlorophenol												R					
1,3-Dichlorobenzene												R					
1,4-Dichlorobenzene												R					
Benzyl alcohol												R					
1,2-Dichlorobenzene												R					
2-Methylphenol					J							R					
bis(2-Chloroisopropyl)ether												R					
4-Methylphenol					J							R					
N Nitroso-di-n-dipropylamine												R					
Hexachloroethane												R					
Nitrobenzene												R					
Isophorone												R					
2-Nitrophenol												R					
2,4-Dimethylphenol					J							R					
Benzoic acid												R					
bis(2-Chloroethoxy)methane												R					
2,4-Dichlorophenol												R					
1,2,4-Trichlorobenzene												R					
Naphthalene	J	J	J	2200	270000 E		J	950	1300	J	J	J		J			
4-Chloroaniline												R					
Hexachlorobutadiene												R					
4-Chloro-3-Methylphenol												R					
2-Methylnaphthalene	J	J	J	J	3300000 E			J	J	J	J	J		J			
Hexachlorocyclopentadiene												R					
2,4,6-Trichlorophenol												R					
2,4,5-Trichlorophenol												R					
2-Chloronaphthalene												R					
2-Nitroaniline												R					
Dimethylphthalate												R					
Acenaphthylene	J	J	J	3600	2600000 E		J	2300	3700	2100	990	J		J			
2,6-Dinitrotoluene												R					
3-Nitroaniline												R					
Acenaphthene	J	850	J	1100	460000 E		J	J	[illegible]	J	J	J		[illegible]			
2,4-Dinitrophenol												R					
4-Nitrophenol					R		R					R					
Dibenzofuran	J	J	J		2300000 E			J	860	J	J	J		J			
2,4-Dinitrotoluene												R					
Diethylphthalate												R					
4-Chlorophenyl-phenyl ether												R					
Fluorene	J	J	J	2200	2500000 E			1400	1700	J	[illegible]	J		J			
4-Nitroaniline										R		R					
4,6-Dinitro-2-methylphenol												R					
N-nitrosodiphenylamine												R					
4-Bromophenyl-phenyl ether												R					
Hexachlorobenzene												R					

SITE NAME ELIZABETH COAL GAS SITE #2
TDD#: 02-9004-38
SAMPLING DATE: 6/12/90
EPA CASE NO.. 14272 LAB: ENCOT

SEMI-VOLATILES

Sample ID No	NJGA-S1	NJGA-S2(DUP)	NJGA-S3	NJGA S4	NJGA-S5	NJGA-S6	NJGA-S7(MS/MSD)	NJGA-S8	NJGA-S9	NJGA S10	NJGA-S11	NJGA-S12	NJGA-S13	NJGA-S14	NJGA-RIN1	NJGA-RIN2	NJGA-RIN3
Traffic Report No.	BDN53	BDN54	BDN55	BDN56	BDN57	BDN58	BDN59	BDN60	BDN61	BDN62	BDN63	BDN64	BDN65	BDN66	BDN69	BDN70	BDN71
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	1/Y	1/Y	1/Y	1/Y	10(MED)	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1/Y	1	1	1
Percent Moisture	16	15	14	23	17	16	10	14	17	18	12	9	14	15	--	--	--
Pentachlorophenol																	
Phenanthrene					R							R					
Anthracene	2900	5300	3600	44000	220000 E		740	11000	20000	7900	5200	3700 E		10000			
Di-n-butylphthalate	1300	2800	1300	7600	2900000		J	3800	5200	1700	1300	1200 E		J			
Fluoranthene										J		J					
Pyrene	7700	11000	8400	140000	140000 E		2300	27000	34000	15000	12000 E	7900 E	J	9600			
Butylbenzylphthalate	7800	10000	8600	140000	140000 E		2900	26000	32000	9200	3400	5700 E		8800			
3,3'-Dichlorobenzidine												R		J			
Benzo(a)anthracene	5900	7200	5600	74000	2500000 E		1600	14000	16000	12000	7100	R 3600 E		3600			
Chrysene	5400	7800	5800	140000	2800000 E		1500	22000	27000	12000	9200	4400 E		5400			
bis(2-Ethylhexyl)phthalate	J		J									J	J				
Di-n-octylphthalate												R					
Benzo(b)fluoranthene	4900	5300	4600	82000	1500000 E		1700	14000	16000	16000 E	8400	5100 E		5000			
Benzo(k)fluoranthene	2900	3800	3200		1400000 E			7600			3300	2500 E					
Benzo(a)pyrene	3700	3700	3100	94000	1900000 E		1200	9600	4100	9300	6100	3600 E		3300			
Indeno(1,2,3-cd)pyrene	3200	3200	2800	73000	1000000 E		1000	8700	8900	8200	5200	2700 E		2500			
Dibenz(a,h)anthracene	1900	1700	1700	11000	570000 E		J	6000	5100	3500	2200	1100 E		940			
Benzo(g,h,i)perylene	2800	2800	2500	57000	870000 E		830	8400	8000	8400	3900	2100 E		3000			

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 the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: ELIZABETH COAL GAS SITE #2
TDD#: 02-9004-38
SAMPLING DATE: 6/12/90
EPA CASE NO.: 14272 LAB: ENCOT

PESTICIDES																	
Sample ID No.	NJGA S1	NJGA-S2(DUP)	NJGA-S3	NJGA-S4	NJGA-S5	NJGA S6	NJGA-S7(MS/MSD)	NJGA-S8	NJGA-S9	NJGA-S10	NJGA-S11	NJGA-S12	NJGA-S13	NJGA-S14	NJGA-RIN1	NJGA-RIN2	NJGA-RIN3
Traffic Report No.	BDN53	BDN54	BDN55	BDN56	BDN57	BDN58	BDN59	BDN60	BDN61	BDN62	BDN63	BDN64	BDN65	BDN66	BDN69	BDN70	BDN71
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/L	ug/L	ug/L
Dilution Factor/GPC Cleanup (Y)	2/Y	4/Y	4/Y	10/Y	10(MED)	5/Y	4/Y	5/Y	5/Y	4/Y	5/Y	1/Y	5/Y	4/Y	1	1	1
Percent Moisture	16	15	14	23	17	16	10	14	17	18	12	9	14	15	--	--	--
alpha-BHC																	
beta-BHC																	
delta-BHC																	
gamma-BHC (Lindane)																	
Heptachlor																	
Aldrin																	
Heptachlor epoxide																	
Endosulfan I																	
Dieldrin																	
4,4'-DDE																	
Endrin																	
Endosulfan II																	
4,4'-DDD																	
Endosulfan sulfate																	
4,4'-DDT								230	220 E	J	J			J			
Methoxychlor																	
Endrin ketone																	
alpha-Chlordane																	
gamma-Chlordane																	
Toxaphene																	
Aroclor-1016																	
Aroclor-1221																	
Aroclor-1232																	
Aroclor-1242																	
Aroclor-1248																	
Aroclor-1254																	
Aroclor-1260																	

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 the material
NR - analysis not required
Detection limits elevated if Dilution Factor >1 and/or percent moisture >0%

SITE NAME: ELIZABETH COAL GAS SITE #2
TDD#: 02-9004-38
SAMPLING DATE: 6/12/90
EPA CASE NO.: 14272
LAB NAME: BETZ

INORGANICS

Sample ID No.	NJGA-S1	NJGA-S2(DUP)	NJGA-S3	NJGA-S4	NJGA-S5	NJGA-S6	NJGA-S7(MS/MSD)	NJGA-S8	NJGA-S9	NJGA-S10	NJGA-S11	NJGA-S12	NJGA-S13	NJGA-S14	NJGA-RIN1	NJGA-RIN2	NJGA-RIN3
Traffic Report No.	MBCN25	MBCN26	MBCY72	MBCY73	MBCY74	MBCY75	MBCY76	MBCY77	MBCY78	MBCY79	MBCY80	MBCY81	MBCY82	MBCY83	MBCY86	MBCY87	MBCY88
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L	ug/L	ug/L
Aluminum	13900	13600	11500	10300	3570	15300	9230	12700	12600	13600	11700	12900	18300	10700		J	
Antimony																	
Arsenic	29.2	22.5	8.9	3.2	3.1	J	4.3	6.4	9.6	5.3	7.2 E	8.6	J	7.7			
Barium	134	129	138	109	J	57	48.9	155	170	178	186	152	73.3	178			
Beryllium	J	J	J	J	J	J	J	J	J	J	J	J	1.1	J			
Cadmium	1.2	1.4	2.5	J	J	J		J	1.4	1.9	1.6	1.3	J	J	J		
Calcium	4910	4430	4940	1410	1180	1900	1120	15100	13000	10800	5050	6320	1260	3980	J	J	J
Chromium	56.4 E	51.9 E	46.6 E	22.3 E	36.1 E	23 E	20.6 E	28.1 E	29.6 E	42.3 E	32.9 E	43.4 E	29.2 E	489 E			
Cobalt	J	J	J	J	J	J	J	J	J	J	J	J	12.4	J			
Copper	68.4 E	157 E	117 E	35.1 E	13.7 E	16.3 E	14.5 E	72.5 E	94.5 E	131 E	269 E	89 E	17.7 E	66.9 E			
Iron	26400	27100	26300	19700	5560	26400	14900	28100	25800	28900	24100	25800	30800	22300			
Lead	267	185	236	159	25.5 E	9.3 E	56.7 E	266	294	314	264	263	14.7 E	362	J	J	J
Magnesium	6130	6000	5610	4480	J	6590	1280	5440	6500	7650	6410	6899	8360	4660			
Manganese	362 E	477 E	388 E	181 E	61.1 E	480 E	130 E	476 E	500 E	485 E	462 E	596 E	612 E	407 E			
Mercury	1.2	0.85	0.72	1.3	0.39	0.15	0.31	0.9	1	0.86	0.51	0.62		0.32			
Nickel	26.4	27.1	31.3	15.1	25.4	19.6	J	22.8	25.4	37.2	24.5	29.1	26.2	22.6			
Potassium	2580	2510	2290	2030	J	3070	J	2240	2500	2840	2390	2820	3350	1990			
Selenium	J	J	J	J	1.7		J	J	J	J	J	J		J			
Silver										J							
Sodium	J	J	1610	J	J	J	J	J	1500	2070	2830	2200	J	J	J	J	J
Thallium																	J
Vanadium	35.8 E	36 E	32.9 E	25.5 E	12.8 E	33.6 E	20.2 E	34.3 E	32.7 E	37.5 E	33.6 E	36.8 E	38.8 E	40.6 E			
Zinc	202	199	301	120	31.7	50.7	55.7	201	229	303	215	213	62.3	201	J	J	J
Cyanide								2.2									

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

Case# 14272 Site Elizabeth Coal Gas Matrix: Soil 14

SDG# MBCN-25 Lab BETZ-PA Water 3

Contractor WESTON-ESAT Reviewer Smita Other —

A.2.1 The case description and exceptions, if any, are noted below with reason(s) for rejection or qualification as estimated value(s) J.

I/ Matrix Spike recovery :-

Soil matrix spiked Sample recovery for Mn was greater than 125%. Therefore all positive Sample results for Mn were Considered to be estimated and flagged "J".

"J" Mn → MBCN25; MBCN-26; MBCY-72, MBCY-73; 74; 75; 76; 77; 78; 79; MBCY-80; 81; 82 and 83.

II/ Method of Standard Addition :-

AS: The correlation of coefficient was less than 0.995 for MSA. Therefore AS-MBCY-80 was estimated and flagged "J".

"J" AS → MBCY-80.

A.2.1 (continuation)

III) ICP Serial Dilution:-

Analysis yielded % concentration differences >10% between undiluted and diluted (5x) ICP soil Digestates for Cr, Cu and V. Concentration differences of these magnitudes may indicate a chemical or physical interference in the ICP measurment of these analytes. For this reason Cr, Cu and V for Soil matrix (>10x IDL's) in the following samples have been estimated as "J".

"J" Cr; Cu; V → MBCN-25; MBCN-26.
MBCY-72; 73; 74; 75; 76
MBCY-77; 78; 79; 80; 81
MBCY-82 and 83.

IV) CRDL Standard:-

Analysis of the CRDL standards yielded % recoveries less than 80% for Tl; Sb and Cr and therefore the

A.2.1 (continuation)

following samples which have these analytes in the concentration range of 0-4xCRDL for ICP Parameters and 0-2xCRDL for Furnace Parameter have been estimated as "J".:-

"J" Sb → MBCN-25; MBCN-26; MBCY-72; 73; MBCY-74; 75; 76; 77; 78; 79; 80; MBCY-81; 82; 83; 86; 87 and 88.

"J" Tl → MBCN-25; 26; MBCY-72; 74; 75; MBCY-76; 77; 78; 79; 80; 81; MBCY-86; 87 and 88.

V)

Pb(F):- In 1st, 2nd and 3rd run a 40 µg Pb/L standard injected and read 25.2/25.4 µg Pb/L. 37 Percent differences from the Nominal values. A 80 µg Pb/L standard injected and read 65.1/132.3/& 101.3 µg Pb/L. 18.6/65.4/and 26.6 percent differences from the Nominal values. Therefore [redacted]

Positive (greater than CRDL) values have been estimated as "J".

"J" Pb(F) → MBCY-74, 75, 76, and 82.

.2 Contract-Problems/Non-Compliance

1) AS - Sample No's MBCN 26 & 27 were diluted beyond Contract Requirements but Lab failed to Report dilution factor's on Form I's.

2) TL - MBCY-79 - No "W" flag required because analytical spike recovery is 94% (between 85-115% - see pg-799.)

MMB Reviewer: _____ Date: _____
Signature

Contractor Reviewer: Anita Sunbay Date: 07-31-90.
Signature

Verified by: Gale S. Bashart Date: 8/1/90

U. S. EPA - CLP
COVER PAGE - INORGANIC ANALYSIS DATA PACKAGE

RECEIVED
JUL 18 1990

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

SOW No.: 7/88

EPA Sample No.	Lab Sample ID
MBCN25	MBCN25
MBCN26	MBCN26
MBCY72	MBCY72
MBCY73	MBCY73
MBCY74	MBCY74
MBCY75	MBCY75
MBCY76	MBCY76
MBCY76D	MBCY76D
MBCY76S	MBCY76S
MBCY77	MBCY77
MBCY78	MBCY78
MBCY79	MBCY79
MBCY80	MBCY80
MBCY81	MBCY81
MBCY82	MBCY82
MBCY83	MBCY83
MBCY86	MBCY86
MBCY87	MBCY87
MBCY88	MBCY88

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES
If yes, were raw data generated before application of background corrections? Yes/No YES

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: Gary J Kralik Name: GARY J. KRALIK

Date: 7/17/90 Title: PROJECT MANAGER

RECEIVED
JUL 18 1990
S & M BRANCH

CASE 14272 NARRATIVE
SDG MBCN25
07/17/90

1.) Calibration standards are prepared daily at Betz Labs, in accordance with our Standard Operating Procedures.

2.) Duplicate, spike, and serial dilution were not performed for the water matrix because all samples included in the SDG were rinsates which do not require QC. This was confirmed in a telephone conversation with David Mack of SMO and is documented in a telephone log in the deliverable paackage.

3.) The apparent CCV and CCB timing errors on run logs 14 AU, AV, AZ are due to switching between MSA and normal analytical modes on the AA. MSA requires only a single burn. CCV and CCB QC samples require duplicate burns resulting in twice as much time per sample.

4.) Samples on the end of Pb run on 6/27/90 (run log 14 AO beginning at 11:58) are included for dilution justification only. Samples MBCY73A, MBCY74A and MBCY75A were all unmeasurably over the calibration range so spike recoveries could not be calculated and are therefore absent on 14 AO.

5) The plasma run on 7/04/90 for Al, Sb, Cd, Cr, Fe, and Ag includes 3 CRI, ICSA, and ICSAB in accordance with SOW 7/88 requirements because the run exceeds 8 hours in length.

RECEIVED
JUL 18 1990
S & M BRANCH

6) The following elements were run on the instrumentation indicated:

Instrument ID	Date	Elements
ICP-3410	07/04/90	Al,Sb,Cd,Cr,Fe,Ag
ICP-3410	07/06/90	Be
ICP-3410	07/07/90	Ba,Ca,Co,Cu,Pb,Mg,Mn,Ni,V,Zn
ICP-3410	07/08/90	Mn (post-digest. spike only)
ICP-3410	07/15/90	K,Na

Gary J. Kralik
Technical Manager

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCN25

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCN25

Level (low/med): LOW Date Received: 6/13/90

% Solids: 84.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13900.00			P
7440-36-0	Antimony	12.00	U	J	P
7440-38-2	Arsenic	29.20		*	F
7440-39-3	Barium	134.00			P
7440-41-7	Beryllium	.71	B		P
7440-43-9	Cadmium	1.20			P
7440-70-2	Calcium	4910.00			P
7440-47-3	Chromium	56.40		J	P
7440-48-4	Cobalt	7.80	B		P
7440-50-8	Copper	68.40		*J	P
7439-89-6	Iron	26400.00			P
7439-92-1	Lead	267.00			P
7439-95-4	Magnesium	6130.00			P
7439-96-5	Manganese	362.00		N*J	P
7439-97-6	Mercury	1.20			CV
7440-02-0	Nickel	26.40			P
7440-09-7	Potassium	2580.00			P
7782-49-2	Selenium	.52	B		F
7440-22-4	Silver	1.20	U		P
7440-23-5	Sodium	954.00	B		P
7440-28-0	Thallium	.94	U	J	F
7440-62-2	Vanadium	35.80		J	P
7440-66-6	Zinc	202.00		*	P
	Cyanide	1.20	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCN26

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCN26

Level (low/med): LOW Date Received: 6/13/90

% Solids: 87.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600.00			P
7440-36-0	Antimony	11.60	U	J	P
7440-38-2	Arsenic	22.50		*	F
7440-39-3	Barium	129.00			P
7440-41-7	Beryllium	.68	B		P
7440-43-9	Cadmium	1.40			P
7440-70-2	Calcium	4430.00			P
7440-47-3	Chromium	51.90		J	P
7440-48-4	Cobalt	8.20	B		P
7440-50-8	Copper	157.00		*J	P
7439-89-6	Iron	27100.00			P
7439-92-1	Lead	185.00			P
7439-95-4	Magnesium	6000.00			P
7439-96-5	Manganese	477.00		N*J	P
7439-97-6	Mercury	.85			CV
7440-02-0	Nickel	27.10			P
7440-09-7	Potassium	2510.00			P
7782-49-2	Selenium	.41	B		F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	1060.00	B		P
7440-28-0	Thallium	.92	U	J	F
7440-62-2	Vanadium	36.00			P
7440-66-6	Zinc	199.00		J *	P
	Cyanide	1.10	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS; SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY72

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY72

Level (low/med): LOW Date Received: 6/13/90

% Solids: 87.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11500.00			P
7440-36-0	Antimony	11.70	U	J	P
7440-38-2	Arsenic	8.90		*	F
7440-39-3	Barium	138.00			P
7440-41-7	Beryllium	.69	B		P
7440-43-9	Cadmium	2.50			P
7440-70-2	Calcium	4940.00			P
7440-47-3	Chromium	46.60		J	P
7440-48-4	Cobalt	8.20	B		P
7440-50-8	Copper	117.00		* J	P
7439-89-6	Iron	26300.00			P
7439-92-1	Lead	236.00			P
7439-95-4	Magnesium	5610.00			P
7439-96-5	Manganese	388.00		N* J	P
7439-97-6	Mercury	.72			CV
7440-02-0	Nickel	31.30			P
7440-09-7	Potassium	2290.00			P
7782-49-2	Selenium	.43	B		F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	1610.00			P
7440-28-0	Thallium	.91	U	J	F
7440-62-2	Vanadium	32.90		J	P
7440-66-6	Zinc	301.00		*	P
	Cyanide	1.10	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS; SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY73

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY73

Level (low/med): LOW Date Received: 6/13/90

% Solids: 75.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300.00			P
7440-36-0	Antimony	13.50	U	J	P
7440-38-2	Arsenic	3.20		*	F
7440-39-3	Barium	109.00			P
7440-41-7	Beryllium	.53	B		P
7440-43-9	Cadmium	.53	B		P
7440-70-2	Calcium	1410.00			P
7440-47-3	Chromium	22.30		J	P
7440-48-4	Cobalt	7.20	B		P
7440-50-8	Copper	35.10		* J	P
7439-89-6	Iron	19700.00			P
7439-92-1	Lead	159.00			P
7439-95-4	Magnesium	4480.00			P
7439-96-5	Manganese	181.00		N* J	P
7439-97-6	Mercury	1.30			CV
7440-02-0	Nickel	15.10			P
7440-09-7	Potassium	2030.00			P
7782-49-2	Selenium	.56	B		F
7440-22-4	Silver	1.30	U		P
7440-23-5	Sodium	1160.00	B		P
7440-28-0	Thallium	1.10	U		F
7440-62-2	Vanadium	25.50		J	P
7440-66-6	Zinc	120.00		*	P
	Cyanide	1.30	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
GRASS; SMALL ROCKS

00005

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY74

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY74

Level (low/med): LOW Date Received: 6/13/90

% Solids: 90.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3570.00			P
7440-36-0	Antimony	11.10	U	J	P
7440-38-2	Arsenic	3.10		*	F
7440-39-3	Barium	34.30	B		P
7440-41-7	Beryllium	.22	B		P
7440-43-9	Cadmium	.43	B		P
7440-70-2	Calcium	1180.00			P
7440-47-3	Chromium	36.10		J	P
7440-48-4	Cobalt	2.20	B		P
7440-50-8	Copper	13.70		*J	P
7439-89-6	Iron	5560.00			P
7439-92-1	Lead	25.50		*J	F
7439-95-4	Magnesium	1070.00	B		P
7439-96-5	Manganese	61.10		N*J	P
7439-97-6	Mercury	.39			CV
7440-02-0	Nickel	25.40			P
7440-09-7	Potassium	479.00	B		P
7782-49-2	Selenium	1.70			F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	220.00	B		P
7440-28-0	Thallium	.75	U	W J	F
7440-62-2	Vanadium	12.80		J	P
7440-66-6	Zinc	31.70		*	P
	Cyanide	1.10	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROCKS; TAR-LIKE CHUNKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY75

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY75

Level (low/med): LOW Date Received: 6/13/90

% Solids: 84.5

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15300.00			P
7440-36-0	Antimony	12.10	U	J	P
7440-38-2	Arsenic	1.70	B	*	F
7440-39-3	Barium	57.00			P
7440-41-7	Beryllium	.95	B		P
7440-43-9	Cadmium	.47	B		P
7440-70-2	Calcium	1900.00			P
7440-47-3	Chromium	23.00		J	P
7440-48-4	Cobalt	8.50	B		P
7440-50-8	Copper	16.30		*J	P
7439-89-6	Iron	26400.00			P
7439-92-1	Lead	9.30		S*J	F
7439-95-4	Magnesium	6590.00			P
7439-96-5	Manganese	480.00		N*J	P
7439-97-6	Mercury	.15			CV
7440-02-0	Nickel	19.60			P
7440-09-7	Potassium	3070.00			P
7782-49-2	Selenium	.23	U		F
7440-22-4	Silver	1.20	U		P
7440-23-5	Sodium	291.00	B		P
7440-28-0	Thallium	.94	U	W J	F
7440-62-2	Vanadium	33.60		J	P
7440-66-6	Zinc	50.70		*	P
	Cyanide	1.20	U		C

Color Before: RED Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS; SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY76

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY76

Level (low/med): LOW Date Received: 6/13/90

% Solids: 90.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9230.00			P
7440-36-0	Antimony	11.20	U	J	P
7440-38-2	Arsenic	4.30		*	F
7440-39-3	Barium	48.90			P
7440-41-7	Beryllium	.22	B		P
7440-43-9	Cadmium	.44	U		P
7440-70-2	Calcium	1120.00			P
7440-47-3	Chromium	20.60		J	P
7440-48-4	Cobalt	2.00	B		P
7440-50-8	Copper	14.50		*J	P
7439-89-6	Iron	14900.00			P
7439-92-1	Lead	56.70		*J	F
7439-95-4	Magnesium	1280.00			P
7439-96-5	Manganese	130.00		N*J	P
7439-97-6	Mercury	.31			CV
7440-02-0	Nickel	5.50	B		P
7440-09-7	Potassium	761.00	B		P
7782-49-2	Selenium	.28	B	W	F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	124.00	B		P
7440-28-0	Thallium	.87	U	WJ	F
7440-62-2	Vanadium	20.20		J	P
7440-66-6	Zinc	55.70		*	P
	Cyanide	1.10	U		C

Color Before: YELLOW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY77

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY77

Level (low/med): LOW Date Received: 6/13/90

% Solids: 86.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12700.00			P
7440-36-0	Antimony	11.70	U	J	P
7440-38-2	Arsenic	6.40		*	F
7440-39-3	Barium	155.00			P
7440-41-7	Beryllium	.69	B		P
7440-43-9	Cadmium	.69	B		P
7440-70-2	Calcium	15100.00			P
7440-47-3	Chromium	28.10		J	P
7440-48-4	Cobalt	8.10	B		P
7440-50-8	Copper	72.50		*J	P
7439-89-6	Iron	28100.00			P
7439-92-1	Lead	266.00			P
7439-95-4	Magnesium	5440.00			P
7439-96-5	Manganese	476.00		N*J	P
7439-97-6	Mercury	.90			CV
7440-02-0	Nickel	22.80			P
7440-09-7	Potassium	2240.00			P
7782-49-2	Selenium	.49	B		F
7440-22-4	Silver	1.20	U		P
7440-23-5	Sodium	1070.00	B		P
7440-28-0	Thallium	.93	U	WJ	F
7440-62-2	Vanadium	34.30		J	P
7440-66-6	Zinc	201.00		*	P
	Cyanide	2.20			C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS; SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY78

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY78

Level (low/med): LOW Date Received: 6/13/90

% Solids: 84.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12600.00			P
7440-36-0	Antimony	11.90	U	J	P
7440-38-2	Arsenic	9.60		*	F
7440-39-3	Barium	170.00			P
7440-41-7	Beryllium	.70	B		P
7440-43-9	Cadmium	1.40			P
7440-70-2	Calcium	13000.00			P
7440-47-3	Chromium	29.60		J	P
7440-48-4	Cobalt	8.20	B		P
7440-50-8	Copper	94.50		*J	P
7439-89-6	Iron	25800.00			P
7439-92-1	Lead	294.00			P
7439-95-4	Magnesium	6500.00			P
7439-96-5	Manganese	500.00		N*J	P
7439-97-6	Mercury	1.00			CV
7440-02-0	Nickel	25.40			P
7440-09-7	Potassium	2500.00			P
7782-49-2	Selenium	.49	B		F
7440-22-4	Silver	1.20	U		P
7440-23-5	Sodium	1500.00			P
7440-28-0	Thallium	.93	U	W J	F
7440-62-2	Vanadium	32.70		J	P
7440-66-6	Zinc	229.00		*	P
	Cyanide	1.20	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS

FORM I - IN 7/88

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY79

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY79

Level (low/med): LOW Date Received: 6/13/90

% Solids: 83.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13600.00			P
7440-36-0	Antimony	12.20	U	J	P
7440-38-2	Arsenic	5.30		*	F
7440-39-3	Barium	178.00			P
7440-41-7	Beryllium	.96	B		P
7440-43-9	Cadmium	1.90			P
7440-70-2	Calcium	10800.00			P
7440-47-3	Chromium	42.30		J	P
7440-48-4	Cobalt	9.40	B		P
7440-50-8	Copper	131.00		*J	P
7439-89-6	Iron	28900.00			P
7439-92-1	Lead	314.00			P
7439-95-4	Magnesium	7650.00			P
7439-96-5	Manganese	485.00		N*J	P
7439-97-6	Mercury	.86			CV
7440-02-0	Nickel	37.20			P
7440-09-7	Potassium	2840.00			P
7782-49-2	Selenium	.50	B		F
7440-22-4	Silver	1.20	B		P
7440-23-5	Sodium	2070.00			P
7440-28-0	Thallium	.96	U	W J	F
7440-62-2	Vanadium	37.50			P
7440-66-6	Zinc	303.00		J *	P
	Cyanide	1.20	U		C

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROOTS; SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY80

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY80

Level (low/med): LOW Date Received: 6/13/90

% Solids: 88.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11700.00			P
7440-36-0	Antimony	11.50	U	J	P
7440-38-2	Arsenic	7.20		+* J	F
7440-39-3	Barium	186.00			P
7440-41-7	Beryllium	.68	B		P
7440-43-9	Cadmium	1.60			P
7440-70-2	Calcium	5050.00			P
7440-47-3	Chromium	32.90		J	P
7440-48-4	Cobalt	6.50	B		P
7440-50-8	Copper	269.00		* J	P
7439-89-6	Iron	24100.00			P
7439-92-1	Lead	264.00			P
7439-95-4	Magnesium	6410.00			P
7439-96-5	Manganese	462.00		N* J	P
7439-97-6	Mercury	.51			CV
7440-02-0	Nickel	24.50			P
7440-09-7	Potassium	2390.00			P
7782-49-2	Selenium	.36	B		F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	2830.00			P
7440-28-0	Thallium	.90	U	J	F
7440-62-2	Vanadium	33.60		J	P
7440-66-6	Zinc	215.00		*	P
	Cyanide	1.10	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY81

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY81

Level (low/med): LOW Date Received: 6/13/90

% Solids: 90.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12900.00			P
7440-36-0	Antimony	11.20	U	J	P
7440-38-2	Arsenic	8.60		S*	F
7440-39-3	Barium	152.00			P
7440-41-7	Beryllium	.88	B		P
7440-43-9	Cadmium	1.30			P
7440-70-2	Calcium	6820.00			P
7440-47-3	Chromium	43.40		J	P
7440-48-4	Cobalt	8.60	B		P
7440-50-8	Copper	89.00		*J	P
7439-89-6	Iron	25800.00			P
7439-92-1	Lead	263.00			P
7439-95-4	Magnesium	6890.00			P
7439-96-5	Manganese	596.00		N*J	P
7439-97-6	Mercury	.62			CV
7440-02-0	Nickel	29.10			P
7440-09-7	Potassium	2820.00			P
7782-49-2	Selenium	.51	B		F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	2200.00			P
7440-28-0	Thallium	.88	U	WJ	F
7440-62-2	Vanadium	36.80		J	P
7440-66-6	Zinc	213.00		*	P
	Cyanide	1.10	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROCKS; GLASS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY82

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY82

Level (low/med): LOW Date Received: 6/13/90

% Solids: 86.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18300.00			P
7440-36-0	Antimony	11.70	U	J	P
7440-38-2	Arsenic	1.60	B	*	F
7440-39-3	Barium	73.30			P
7440-41-7	Beryllium	1.10			P
7440-43-9	Cadmium	.46	B		P
7440-70-2	Calcium	1260.00			P
7440-47-3	Chromium	29.20		J	P
7440-48-4	Cobalt	12.40			P
7440-50-8	Copper	17.70		*J	P
7439-89-6	Iron	30800.00			P
7439-92-1	Lead	14.70		* J	F
7439-95-4	Magnesium	8360.00			P
7439-96-5	Manganese	612.00		N*J	P
7439-97-6	Mercury	.11	U		CV
7440-02-0	Nickel	26.20			P
7440-09-7	Potassium	3350.00			P
7782-49-2	Selenium	.23	U		F
7440-22-4	Silver	1.10	U		P
7440-23-5	Sodium	219.00	B		P
7440-28-0	Thallium	.91	U		F
7440-62-2	Vanadium	38.80		J	P
7440-66-6	Zinc	62.30		*	P
	Cyanide	1.10	U		C

Color Before: RED Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY83

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): SOIL Lab Sample ID: MBCY83

Level (low/med): LOW Date Received: 6/13/90

% Solids: 84.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10700.00			P
7440-36-0	Antimony	12.00	U	J	P
7440-38-2	Arsenic	7.70		*	F
7440-39-3	Barium	178.00			P
7440-41-7	Beryllium	.70	B		P
7440-43-9	Cadmium	.94	B		P
7440-70-2	Calcium	3980.00			P
7440-47-3	Chromium	489.00		J	P
7440-48-4	Cobalt	7.00	B		P
7440-50-8	Copper	66.90		* J	P
7439-89-6	Iron	22300.00			P
7439-92-1	Lead	362.00			P
7439-95-4	Magnesium	4660.00			P
7439-96-5	Manganese	407.00		N* J	P
7439-97-6	Mercury	.32			CV
7440-02-0	Nickel	22.60			P
7440-09-7	Potassium	1990.00			P
7782-49-2	Selenium	.35	B		F
7440-22-4	Silver	1.20	U		P
7440-23-5	Sodium	143.00	B		P
7440-28-0	Thallium	.94	U		F
7440-62-2	Vanadium	40.60		J	P
7440-66-6	Zinc	201.00		*	P
	Cyanide	1.20	U		C

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts: YES

Comments:
GRASS, ROOTS, SMALL ROCKS

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY86

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): WATER Lab Sample ID: MBCY86

Level (low/med): LOW Date Received: 6/13/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29.00	U		P
7440-36-0	Antimony	51.00	U	J	P
7440-38-2	Arsenic	1.00	U		F
7440-39-3	Barium	4.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	B		P
7440-70-2	Calcium	114.00	B		P
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt	6.00	U		P
7440-50-8	Copper	4.00	U		P
7439-89-6	Iron	13.00	U		P
7439-92-1	Lead	2.80	B		F
7439-95-4	Magnesium	95.00	U		P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	16.00	U		P
7440-09-7	Potassium	478.00	U		P
7782-49-2	Selenium	1.00	U	W	F
7440-22-4	Silver	5.00	U		P
7440-23-5	Sodium	308.00	B		P
7440-28-0	Thallium	4.00	U	W J	F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	5.00	B		P
	Cyanide	10.00	U		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY87

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): WATER Lab Sample ID: MBCY87

Level (low/med): LOW Date Received: 6/13/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	48.00	B		P
7440-36-0	Antimony	51.00	U	J	P
7440-38-2	Arsenic	1.00	U		F
7440-39-3	Barium	4.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	155.00	B		P
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt	6.00	U		P
7440-50-8	Copper	4.00	U		P
7439-89-6	Iron	13.00	U		P
7439-92-1	Lead	2.40	B	W	F
7439-95-4	Magnesium	95.00	U		P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	16.00	U		P
7440-09-7	Potassium	478.00	U		P
7782-49-2	Selenium	1.00	U	W	F
7440-22-4	Silver	5.00	U		P
7440-23-5	Sodium	354.00	B		P
7440-28-0	Thallium	4.00	U	J	F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	6.00	B		P
	Cyanide	10.00	U		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MBCY88

Lab Name: BETZ LABORATORIES TREVOSE Contract: 68-D9-0082

Lab Code: BETZPA Case No.: 14272 SAS No.: SDG No.: MBCN25

Matrix (soil/water): WATER Lab Sample ID: MBCY88

Level (low/med): LOW Date Received: 6/13/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29.00	U		P
7440-36-0	Antimony	51.00	U	J	P
7440-38-2	Arsenic	1.00	U		F
7440-39-3	Barium	4.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	2.00	U		P
7440-70-2	Calcium	98.00	B		P
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt	6.00	U		P
7440-50-8	Copper	4.00	U		P
7439-89-6	Iron	13.00	U		P
7439-92-1	Lead	2.90	B		F
7439-95-4	Magnesium	95.00	U		P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	.20	U		CV
7440-02-0	Nickel	16.00	U		P
7440-09-7	Potassium	478.00	U		P
7782-49-2	Selenium	1.00	U		F
7440-22-4	Silver	5.00	U		P
7440-23-5	Sodium	248.00	B		P
7440-28-0	Thallium	5.00	B	J	F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	13.00	B		P
	Cyanide	10.00	U		C

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

ATTACHMENT 1
SOP NO. HW-6

TOTAL REVIEW

PAGE __OF__

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organics Analysis

Case No. 14272 SDG No. 3DN53 LABORATORY Enviro-Tech SITE Elizabeth Coal Gas Site 2

DATA ASSESSMENT:

The current functional guidelines (1988) for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "U" (non-detects), "R" (unusable),or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Reviewer's Signature: Susan Lincoln Date: 08/17/1990

Verified By: Pamela Greenlaw Date: 8/22/1990

ATTACHMENT 1
SOP NO. HW-6

PAGE__OF__

DATA ASSESSMENT:

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

VOA - in BDN57 all analytes (except one already black J'd) were qualified estimated (J) as the holding time was exceeded by 3 days. (acetone was subsequently R'd, as was 2 butanone)

BNA - In BDN64CE all analytes that had been listed as not detected were rejected (R) because the extraction was performed more than 2 weeks after holding time limits. All positive results were qualified estimated (J)
- in BDN57 all analytes (except those already black J'd) were qualified estimated (J) because the extraction was performed less than 2 weeks after holding time limits

Pesticides/PCBs - in BDN57 all analytes were flagged estimated (J) because the holding time was exceeded by less than 2 weeks

DATA ASSESSMENT:

2. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip field, rinse and water blanks are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross- contamination of samples during field operations. If the concentration of the analyte is less than 5 times the blank contaminant level (10 times for the common contaminants), the analytes are qualified as non- detects, "U". The following analytes in the samples shown were qualified with "U" for these reasons:

A) Method blank contamination

VA- The following analytes in the following samples were flagged not detected (U) because of their presence in the corresponding method blanks: 2-butanone in 3DN53, 3DN54, 3DN55, 3DN56, 3DN57, 3DN58, 3DN59, 3DN60, 3DN61, 3DN62, 3DN63, 3DN64, 3DN65, 3DN66, ~~3DN70, and 3DN71~~; acetone in 3DN57 ~~and 3DN58~~, toluene in 3DN53, 3DN54, 3DN55, 3DN56, 3DN58, 3DN59, 3DN60, 3DN61, 3DN62, 3DN63, 3DN64, 3DN65, and 3DN66, methylene chloride in 3DN54, 3DN55, 3DN57, 3DN58, 3DN62, 3DN63, 3DN64, 3DN65 and 3DN66, and benzene in 3DN63, 3DN64 and 3DN65

B) Field or rinse blank contamination ("water blanks" or "distilled water blanks" are validated like any other sample)

VLA - Acetone was qualified not detected in 3DN55, 3DN56, 3DN58, 3DN63, 3DN64, and 3DN65 because of the presence in a corresponding rinsate (3DN70).

C) Trip blank contamination

DATA ASSESSMENT:

4. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) RESPONSE FACTOR:

The response factor measures the instrument's response to specific chemical compounds. The response factor for the Target Compound List (TCL) must be $\geq$ 0.05 in both the initial and continuing calibrations. A value < 0.05 indicates a serious detection and quantitation problem (poor sensitivity). Analytes detected in the sample will be qualified as estimated, "J". All non-detects for that compound will be rejected ("R").

VOA - 2-butanone was rejected (R) in BDN57 because the RRF was less than 0.05.

BNA - 4-Nitroaniline was rejected (R) in BDN62 because the RRF was less than 0.05 on the initial calibration

DATA ASSESSMENT:

5. CALIBRATION:

A) PERCENT RELATIVE STANDARD DEVIATION (%RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Percent RSD must be <30% and %D must be <25%. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects are flagged "UJ" (if %D or RSD >50%). If there is a gross deviation of %RSD and %D, the non-detects may be rejected ("R").

For the PCB/PESTICIDE fraction, %RSD for aldrin, endrin, DDT, and dibutylchlorendate must not exceed 10%. Percent D must be within 15% on the quantitation column and 20% on the confirmation column.

OA - acetone was flagged estimated in BDN54 because the % RSD in the initial calibration was greater than 30 but less than 90

- Acetone was rejected (R) in BDN57 because the % RSD in the initial calibration was greater than 90.

ATTACHMENT
SOP NO. HW-6

PAGE__OF__

DATA ASSESSMENT:

6. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

VOA - All analytes in BDN62 were qualified estimated (J) because one surrogate recovery was above QC limits.

Pesticides/PCBs - 4,4'-DDT was qualified estimated (J) in BDN61 because the surrogate recovery was above QC limits.

DATA ASSESSMENT:

7. INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must not vary by more than a factor of 2 (-50% to +100%) from the associated continuing calibration standard. The retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. If the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified as estimated, "J", and all non-detects as "UJ", or "R" if there is a severe loss of sensitivity.

If an internal standard retention time varies by more than 30 seconds, the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction.

-OA - in BDN54 and BDN63 all analytes not already J'd were flagged estimated (J) because internal standard area counts were out of QC limits
- in BDN55 all analytes quantitated with the internal standards 1,4-dichlorobenzene and chlorobenzene-d5 were flagged J for the reason stated above

DATA ASSESSMENT:

9. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for some additional qualification of the data.

BNA - 4 nitrophenol and pentachlorophenol were rejected (R) in BDN57, and 4-nitrophenol was rejected in BDN59 because both the MS and MSD had less than 10% recovery for these analytes.

ATTACHMENT 1
SOP NO. HW-6

PAGE__OF__

DATA ASSESSMENT:

10. OTHER QC DATA OUT OF SPECIFICATION:

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT (continued on next page if necessary):

12. CONTRACT PROBLEMS____NON-COMPLIANCE:

Benzo(b)fluoranthene in BDN62 & flouranthene in BDN63 were outside linear range therefore a diluted analysis should have been run but was not. These 2 analytes were flagged estimated (J).

13. This package contains re-extraction, re-analysis or dilution. Upon reviewing the QA results, the following form I(s) are identified to be used.

VOA - BDN54, BDN55, BDN62, and BDN63 were rerun due to internal standards being out of QC limits. However, as the holding times were beyond limits in the rerun samples, the original sample data were used.

BNA - BDN64 was rerun because surrogate recoveries were outside QC limits. Surrogate recoveries were within limits for BDN64RE. Therefore, data from the rerun analysis were used.

- BDN56, BDN57, BDN60, and BDN61 were reanalyzed at a dilution, as some of the values for identified target compounds exceeded their linear range. The values from the diluted samples for those analytes were transferred onto the original analysis sheets, and the original analyses were used.

Pesticides/PCBs - As mentioned in the case narrative dilutions were performed on some samples because initial screening showed them [illegible]

DATA ASSESSMENT:

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT (continued):

[redacted] Date: February 1989

Type of Review: Total

Date: August 17, 1990

Case #: 14272

Project: Elizabeth Coal Gas Site 2

Lab Name: Enseco

Reviewer's Initials: [illegible]

Number of Samples: 17

Analytes Rejected Due to Exceeding Review Criteria:

	Surrogates	Holding Time	Calibration	Contamination	ID	MS/MSD Other	Total # Samples	Total # Rejected/ Total # in all Sampl
Acids (15)		15/1				3/2	17	18/255
B/N (50)		30/1	1/1				17	31/850
VOA (34)			2/2	46/14			17	48/578
PEST (20)							17	0/340
PCB (7)							17	0/119
TCDD (1)							0	0/0

Analytes Estimated Due to Exceeding Review Criteria for:

						INTERNAL STANDARDS		
Acids (15)		9/1					17	9/255
B/N (50)		62/2					17	62/850
VOA (34)	34/1	31/1	1/1			66/3	17	152/578
PEST (20)	1/1	20/1					17	21/340
PCB (7)		7/1					17	7/119
TCDD (1)							0	0/0

Report 2

ORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 14272

SDG NO. BDN53

SOW

LABORATORY Enviro-Tech

DATA USER NUS FIT 2

REVIEW COMPLETION DATE August 17, 1990

NO. OF SAMPLES 3 WATER 14 SOIL ____ OTHER

REVIEWER [ ] ESD [ ] ESAT [ ] OTHER, CONTRACT/CONTRACTOR NUS FIT 2

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	X	M	M	
2. GC-MS TUNE/ GC PERFORMANCE	O	O	O	
3. INITIAL CALIBRATIONS	O	O	O	
4. CONTINUING CALIBRATIONS	O	O	O	
5. FIELD BLANKS ("F" = not applicable)	F	F	F	
6. LABORATORY BLANKS	Z	O	O	
7. SURROGATES	M	O	O	
8. MATRIX SPIKE/DUPLICATES	O	O	O	
9. REGIONAL QC ("F" = not applicable)	F	F	F	
10. INTERNAL STANDARDS	M	O	O	
11. COMPOUND IDENTIFICATION	O	O	O	
12. COMPOUND QUANTITATION	O	O	O	
13. SYSTEM PERFORMANCE	M	O	O	
14. OVERALL ASSESSMENT	Z	O	M	

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.

)PO ACTION ITEMS:

REAS OF CONCERN:

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN53

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN53V

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: BDN53V

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 16

Date Analyzed: 06/21/90

Column: (pack/cap) PACK

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	6	U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	4	J
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	15	~~JB~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6 ~~4~~	~~BJ~~ U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U
		6	U

FORM I VOA

1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN54

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN54V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN54V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	UJ
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6 ~~3~~	~~BJ~~ UJ
67-64-1	Acetone	150	J
75-15-0	Carbon Disulfide	4	J
75-35-4	1,1-Dichloroethene	6	UJ
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12 ~~11~~	~~BJ~~ UJ
71-55-6	1,1,1-Trichloroethane	6	UJ
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	3	J
591-78-6	2-Hexanone	12	UJ
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	9	~~B~~ UJ
108-90-7	Chlorobenzene	6	UJ
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN55

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN55V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN55V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	6 ~~3~~	~~BJ~~ U
75-15-0	Carbon Disulfide	32	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	12 ~~5~~	~~BJ~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	~~B~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN56V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN56V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 23 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	76	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	18	~~B~~ U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	13	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	J
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	8	~~B~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	25	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN57VR1

Sample wt/vol: 4.0 (g/mL) G Lab File ID: BDN57VR1

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 Date Analyzed: 06/25/90

Column: (pack/cap) CAP Dilution Factor: 10

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	16000	U J
74-83-9	Bromomethane	16000	U
75-01-4	Vinyl Chloride	16000	U
75-00-3	Chloroethane	16000	U
75-09-2	Methylene Chloride	7600 ~~2300~~	~~BJ~~
67-64-1	Acetone	16000 ~~7000~~	~~BJ~~ R
75-15-0	Carbon Disulfide	10000	J
75-35-4	1,1-Dichloroethene	7600	U
75-35-3	1,1-Dichloroethane	7600	U
540-59-0	(Total)-1,2-Dichloroethene	7600	U
67-66-3	Chloroform	7600	U
107-06-2	1,2-Dichloroethane	7600	U
78-93-3	2-Butanone	21000	~~BJ~~ R
71-55-6	1,1,1-Trichloroethane	7600	U J
56-23-5	Carbon Tetrachloride	7600	U
108-05-4	Vinyl Acetate	16000	U
75-27-4	Bromodichloromethane	7600	U
78-87-5	1,2-Dichloropropane	7600	U
10061-02-6	Trans-1,3-Dichloropropene	7600	U
79-01-6	Trichloroethene	7600	U
124-48-1	Dibromochloromethane	7600	U
79-00-5	1,1,2-Trichloroethane	7600	U
71-43-2	Benzene	82000	
10061-01-5	cis-1,3-Dichloropropene	7600	U
75-25-2	Bromoform	7600	U
108-10-1	4-Methyl-2-Pentanone	16000	U
591-78-6	2-Hexanone	16000	U
127-18-4	Tetrachloroethene	7600	U
79-34-5	1,1,2,2-Tetrachloroethane	7600	U
108-88-3	Toluene	59000	~~B~~
108-90-7	Chlorobenzene	7600	U
100-41-4	Ethylbenzene	2500	J
100-42-5	Styrene	14000	J
1330-20-7	Total Xylenes	68000	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN57VR1

Sample wt/vol: 4.0 (g/mL) G Lab File ID: BDN57VR1

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 Date Analyzed: 06/25/90

Column (pack/cap) CAP Dilution Factor: 10

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	95-15-8	BENZO[B] THIOPHENE	13.02	3000	JN
2.		UNKNOWN	13.62	2000	J
3.		UNKNOWN	24.83	90000	J
4.		UNKNOWN	26.25	60000	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN58

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN58VR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN58VR

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	6 ~~2~~	~~BJ~~ U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	12 ~~5~~	~~BJ~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	11	~~B~~ U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN59

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN59V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN59V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 10 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	11	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	11 ~~4~~	~~BJ~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	7	
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6 ~~5~~	~~BJ~~ U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U
		6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN59

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN59V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN59V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 10 Date Analyzed: 06/21/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 95-15-8	BENZO[B] THIOPHENE	28.80	100	J

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN60V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN60V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12 ~~22~~	~~BJ~~ U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	5	J
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6 ~~4~~	~~BJ~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN61

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN61V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN61V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 17 Date Analyzed: 06/21/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6 ~~4~~	~~BJ~~ U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	5	J
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6 ~~4~~	~~BJ~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN62

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN62V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN62V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 18 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	6	~~BJ~~ U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	12 ~~11~~	~~BJ~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	~~BJ~~ U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN63V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN63V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	~~5~~	~~BJ~~ J
75-15-0	Carbon Disulfide	56	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	~~5~~	~~BJ~~ U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	~~B~~ U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	7	~~B~~ U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN63V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN63V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 Date Analyzed: 06/22/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.97	60	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN64V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN64V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 9 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	5	~~BJ~~ U
67-64-1	Acetone	19	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-35-3	1,1-Dichloroethane	5	U
540-59-0	(Total)-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11 3	~~BJ~~ 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
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5 ~~2~~	~~BJ~~ U
10061-01-5	cis-1,3-Dichloropropene	5	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	5	U
108-88-3	Toluene	6	~~B~~ U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN65

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN65V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN65V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6 ~~5~~	~~BJ~~ U
67-64-1	Acetone	33	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12 ~~5~~	~~BJ~~ U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6 ~~1~~	~~BJ~~ U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	~~B~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN66

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN66V

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BDN66V

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 Date Analyzed: 06/22/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	6 ~~4~~	~~BJ~~ U
67-64-1	Acetone	12	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	(Total)-1,2-Dichloroethene	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12 ~~4~~	~~BJ~~ U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6 ~~5~~	~~BJ~~ U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN69

b Name: ENCOTEC-AA

Contract: 68-D9-0033

Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

trix: (soil/water) WATER

Lab Sample ID: BDN69V

mple wt/vol: 5.0 (g/mL) ML

Lab File ID: BDN69V

el: (low/med) LOW

Date Received: 06/13/90

Moisture: not dec.

Date Analyzed: 06/14/90

umn: (pack/cap) PACK

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-35-3	1,1-Dichloroethane	5	U
540-59-0	(Total)-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
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
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	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	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN70

b Name: ENCOTEC-AA Contract: 68-D9-0033

Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

trix: (soil/water) WATER Lab Sample ID: BDN70V

mple wt/vol: 5.0 (g/mL) ML Lab File ID: BDN70V

el: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. Date Analyzed: 06/14/90

umn: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	8	BJ
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-35-3	1,1-Dichloroethane	5	U
540-59-0	(Total)-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	1	BJ
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
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	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	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN71

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) WATER

Lab Sample ID: BDN71V

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: BDN71V

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec.

Date Analyzed: 06/14/90

Column: (pack/cap) PACK

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-35-3	1,1-Dichloroethane	5	U
540-59-0	(Total)-1,2-Dichloroethene	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	1	BJ
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
78-87-5	1,2-Dichloropropane	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-01-5	cis-1,3-Dichloropropene	5	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	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN53

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN53B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN53B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 16 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) Y pH: 8.2

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	790	U
111-44-4	bis(2-Chloroethyl)Ether	790	U
95-57-8	2-Chlorophenol	790	U
541-73-1	1,3-Dichlorobenzene	790	U
106-46-7	1,4-Dichlorobenzene	790	U
100-51-6	Benzyl Alcohol	790	U
95-50-1	1,2-Dichlorobenzene	790	U
95-48-7	2-Methylphenol	790	U
39638-32-9	bis(2-Chloroisopropyl)Ether	790	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitroso-Di-n-Propylamine	790	U
67-72-1	Hexachloroethane	790	U
98-95-3	Nitrobenzene	790	U
78-59-1	Isophorone	790	U
88-75-5	2-Nitrophenol	790	U
105-67-9	2,4-Dimethylphenol	790	U
65-85-0	Benzoic Acid	790	U
111-91-1	bis(2-Chloroethoxy)Methane	3800	U
120-83-2	2,4-Dichlorophenol	790	U
120-82-1	1,2,4-Trichlorobenzene	790	U
91-20-3	Naphthalene	790	U
106-47-8	4-Chloroaniline	570	J
87-68-3	Hexachlorobutadiene	790	U
59-50-7	4-Chloro-3-Methylphenol	790	U
91-57-6	2-Methylnaphthalene	790	U
77-47-4	Hexachlorocyclopentadiene	150	J
88-06-2	2,4,6-Trichlorophenol	790	U
95-95-4	2,4,5-Trichlorophenol	790	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	790	U
131-11-3	Dimethyl Phthalate	3800	U
208-96-8	Acenaphthylene	790	U
		670	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN53

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN53B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN53B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	710	J
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	300	J
121-14-2	2,4-Dinitrotoluene	790	U
606-20-2	2,6-Dinitrotoluene	790	U
84-66-2	Diethylphthalate	790	U
7005-72-3	4-Chlorophenyl-phenylether	790	U
86-73-7	Fluorene	370	J
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	790	U
101-55-3	4-Bromophenyl-phenylether	790	U
118-74-1	Hexachlorobenzene	790	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	2900	
120-12-7	Anthracene	1300	
84-74-2	Di-n-Butylphthalate	790	U
206-44-0	Fluoranthene	7700	
129-00-0	Pyrene	7800	
85-68-7	Butylbenzylphthalate	790	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	5900	
117-81-7	bis(2-Ethylhexyl)Phthalate	460	J
218-01-9	Chrysene	5400	
117-84-0	Di-n-Octyl Phthalate	790	U
205-99-2	Benzo(b)Fluoranthene	4900	
207-08-9	Benzo(k)Fluoranthene	2900	
50-32-8	Benzo(a)Pyrene	3700	
193-39-5	Indeno(1,2,3-cd)Pyrene	3200	
53-70-3	Dibenz(a,h)Anthracene	1900	
191-24-2	Benzo(g,h,i)Perylene	2800	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN53

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN53B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN53B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. ____ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 1.0

Number TICs found: 16 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.75	700	J
2.		UNKNOWN	7.06	400	J
3.		UNKNOWN	7.95	3000	J
4.	10544-50-0	SULFUR	26.40	10000	J
5.		UNKNOWN PNA	27.28	1000	J
6.		UNKNOWN PNA	28.40	1000	J
7.		UNKNOWN PNA	28.68	600	J
8.		UNKNOWN PNA	30.48	800	J
9.		UNKNOWN PNA	32.55	700	J
10.		UNKNOWN PNA	34.76	2000	J
11.		UNKNOWN PNA	35.22	3000	J
12.		UNKNOWN PNA	35.52	2000	J
13.		UNKNOWN ALKANE	35.72	2000	J
14.		UNKNOWN ALKANE	37.52	2000	J
15.		UNKNOWN	37.73	1000	J
16.		UNKNOWN PNA	39.13	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN54

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN54B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN54B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	780	U
111-44-4	bis(2-Chloroethyl)Ether	780	U
95-57-8	2-Chlorophenol	780	U
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	780	U
100-51-6	Benzyl Alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
39638-32-9	bis(2-Chloroisopropyl)Ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-Di-n-Propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic Acid	780	U
111-91-1	bis(2-Chloroethoxy)Methane	3800	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	780	U
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	590	J
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-Methylphenol	780	U
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	100	J
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	780	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	780	U
131-11-3	Dimethyl Phthalate	3800	U
208-96-8	Acenaphthylene	780	U
		580	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN54

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN54B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN54B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 15 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.7

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	850	
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	280	J
121-14-2	2,4-Dinitrotoluene	780	U
606-20-2	2,6-Dinitrotoluene	780	U
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	520	J
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	5300	
120-12-7	Anthracene	2800	
84-74-2	Di-n-Butylphthalate	780	U
206-44-0	Fluoranthene	11000	
129-00-0	Pyrene	10000	
85-68-7	Butylbenzylphthalate	780	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	7200	
117-81-7	bis(2-Ethylhexyl)Phthalate	780	U
218-01-9	Chrysene	7800	
117-84-0	Di-n-Octyl Phthalate	780	U
205-99-2	Benzo(b)Fluoranthene	5300	
207-08-9	Benzo(k)Fluoranthene	3800	
50-32-8	Benzo(a)Pyrene	3700	
193-39-5	Indeno(1,2,3-cd)Pyrene	3200	
53-70-3	Dibenz(a,h)Anthracene	1700	
191-24-2	Benzo(g,h,i)Perylene	2800	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN54

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN54B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN54B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 dec. ____ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. _____	UNKNOWN	5.63	1000	J
2. _____	UNKNOWN	6.70	500	J
3. _____	UNKNOWN	7.00	500	J
4. _____	UNKNOWN	8.08	1000	J
5. _____	UNKNOWN	24.58	1000	J
6. _____	UNKNOWN	25.33	900	J
7. 10544-50-0	SULFUR	26.23	5000	J
8. _____	UNKNOWN	26.45	5000	J
9. _____	UNKNOWN PNA	27.28	900	J
10. _____	UNKNOWN PNA	30.45	800	J
11. _____	UNKNOWN PNA	35.32	900	J
12. _____	UNKNOWN PNA	35.65	7000	J
13. _____	UNKNOWN ALKANE	35.97	900	J
14. _____	UNKNOWN PNA	36.05	1000	J
15. _____	UNKNOWN PNA	36.60	900	J
16. _____	UNKNOWN PNA	37.43	2000	J
17. _____	UNKNOWN ALKANE	37.67	2000	J
18. _____	UNKNOWN	38.47	2000	J
19. _____	UNKNOWN PNA	38.55	900	J
20. _____	UNKNOWN PNA	39.08	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN55

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN55B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN55B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	770	U
111-44-4	bis(2-Chloroethyl)Ether	770	U
95-57-8	2-Chlorophenol	770	U
541-73-1	1,3-Dichlorobenzene	770	U
106-46-7	1,4-Dichlorobenzene	770	U
100-51-6	Benzyl Alcohol	770	U
95-50-1	1,2-Dichlorobenzene	770	U
95-48-7	2-Methylphenol	770	U
39638-32-9	bis(2-Chloroisopropyl)Ether	770	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitroso-Di-n-Propylamine	770	U
67-72-1	Hexachloroethane	770	U
98-95-3	Nitrobenzene	770	U
78-59-1	Isophorone	770	U
88-75-5	2-Nitrophenol	770	U
105-67-9	2,4-Dimethylphenol	770	U
65-85-0	Benzoic Acid	3700	U
111-91-1	bis(2-Chloroethoxy)Methane	770	U
120-83-2	2,4-Dichlorophenol	770	U
120-82-1	1,2,4-Trichlorobenzene	770	U
91-20-3	Naphthalene	680	J
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	770	U
59-50-7	4-Chloro-3-Methylphenol	770	U
91-57-6	2-Methylnaphthalene	130	J
77-47-4	Hexachlorocyclopentadiene	770	U
88-06-2	2,4,6-Trichlorophenol	770	U
95-95-4	2,4,5-Trichlorophenol	3700	U
91-58-7	2-Chloronaphthalene	770	U
88-74-4	2-Nitroaniline	3700	U
131-11-3	Dimethyl Phthalate	770	U
208-96-8	Acenaphthylene	620	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN55

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN55B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN55B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3700	U
83-32-9	Acenaphthene	490	J
51-28-5	2,4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	240	J
121-14-2	2,4-Dinitrotoluene	770	U
606-20-2	2,6-Dinitrotoluene	770	U
84-66-2	Diethylphthalate	770	U
7005-72-3	4-Chlorophenyl-phenylether	770	U
86-73-7	Fluorene	380	J
100-10-6	4-Nitroaniline	3700	U
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	770	U
101-55-3	4-Bromophenyl-phenylether	770	U
118-74-1	Hexachlorobenzene	770	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	3600	
120-12-7	Anthracene	1300	
84-74-2	Di-n-Butylphthalate	770	U
206-44-0	Fluoranthene	8400	
129-00-0	Pyrene	8600	
85-68-7	Butylbenzylphthalate	770	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	5600	
117-81-7	bis(2-Ethylhexyl)Phthalate	190	J
218-01-9	Chrysene	5800	
117-84-0	Di-n-Octyl Phthalate	770	U
205-99-2	Benzo(b)Fluoranthene	4600	
207-08-9	Benzo(k)Fluoranthene	3200	
50-32-8	Benzo(a)Pyrene	3100	
193-39-5	Indeno(1,2,3-cd)Pyrene	2800	
53-70-3	Dibenz(a,h)Anthracene	1700	
191-24-2	Benzo(g,h,i)Perylene	2500	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN55

ab Name: ENCOTEC-AA Contract: 68-D9-0033

b Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

trix: (soil/water) SOIL Lab Sample ID: BDN55B

mple wt/vol: 30.0 (g/mL) G Lab File ID: BDN55B

vel: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. 14 dec. ____ Date Extracted: 06/16/90

traction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

PC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 1.0

mber TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	_____	UNKNOWN	5.57	1000	J N
2.	_____	UNKNOWN	6.67	1000	J
	_____	UNKNOWN	8.05	4000	J
	203-64-5	4-H-CYCLOPENTA{DEF}PHENANTH	19.72	1000	J
5.	10544-50-0	SULFUR	26.17	6000	J
	_____	UNKNOWN PNA	27.22	800	J
	_____	UNKNOWN PNA	28.33	800	J
8.	_____	UNKNOWN PNA	30.42	800	J
9.	_____	UNKNOWN PNA	31.43	800	J
10.	_____	UNKNOWN PNA	32.47	500	J
11.	_____	UNKNOWN	32.85	1000	J
12.	_____	UNKNOWN	34.03	2000	J
13.	_____	UNKNOWN PNA	34.70	2000	J
14.	_____	UNKNOWN PNA	35.30	6000	J
15.	_____	UNKNOWN ALKANE	35.63	1000	J
16.	_____	UNKNOWN	35.95	1000	J
17.	_____	UNKNOWN ALKANE	37.42	1000	J
18.	_____	UNKNOWN	37.65	1000	J
19.	_____	UNKNOWN	37.83	900	J
20.	_____	UNKNOWN PNA	37.93	900	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN56B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN56B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 23 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	140	J
111-44-4	bis(2-Chloroethyl)Ether	860	U
95-57-8	2-Chlorophenol	860	U
541-73-1	1,3-Dichlorobenzene	860	U
106-46-7	1,4-Dichlorobenzene	860	U
100-51-6	Benzyl Alcohol	860	U
95-50-1	1,2-Dichlorobenzene	860	U
95-48-7	2-Methylphenol	860	U
39638-32-9	bis(2-Chloroisopropyl)Ether	860	U
106-44-5	4-Methylphenol	860	U
621-64-7	N-Nitroso-Di-n-Propylamine	860	U
67-72-1	Hexachloroethane	860	U
98-95-3	Nitrobenzene	860	U
78-59-1	Isophorone	860	U
88-75-5	2-Nitrophenol	860	U
105-67-9	2,4-Dimethylphenol	860	U
65-85-0	Benzoic Acid	860	U
111-91-1	bis(2-Chloroethoxy)Methane	4200	U
120-83-2	2,4-Dichlorophenol	860	U
120-82-1	1,2,4-Trichlorobenzene	860	U
91-20-3	Naphthalene	860	U
106-47-8	4-Chloroaniline	2200	
87-68-3	Hexachlorobutadiene	860	U
59-50-7	4-Chloro-3-Methylphenol	860	U
91-57-6	2-Methylnaphthalene	860	U
77-47-4	Hexachlorocyclopentadiene	460	J
88-06-2	2,4,6-Trichlorophenol	860	U
95-95-4	2,4,5-Trichlorophenol	860	U
91-58-7	2-Chloronaphthalene	4200	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethyl Phthalate	4200	U
208-96-8	Acenaphthylene	860	U
		3600	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN56B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN56B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 23 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.1

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
99-09-2	3-Nitroaniline		4200	U
83-32-9	Acenaphthene		1100	
51-28-5	2,4-Dinitrophenol		4200	U
100-02-7	4-Nitrophenol		4200	U
132-64-9	Dibenzofuran		860	U
121-14-2	2,4-Dinitrotoluene		860	U
606-20-2	2,6-Dinitrotoluene		860	U
84-66-2	Diethylphthalate		860	U
7005-72-3	4-Chlorophenyl-phenylether		860	U
86-73-7	Fluorene		860	U
100-10-6	4-Nitroaniline		2200	
534-52-1	4,6-Dinitro-2-Methylphenol		4200	U
86-30-6	N-Nitrosodiphenylamine (1)		4200	U
101-55-3	4-Bromophenyl-phenylether		860	U
118-74-1	Hexachlorobenzene		860	U
87-86-5	Pentachlorophenol		860	U
85-01-8	Phenanthrene		4200	U
120-12-7	Anthracene	44000	~~15000~~	E D*
84-74-2	Di-n-Butylphthalate		7600	
206-44-0	Fluoranthene		860	U
129-00-0	Pyrene	140,000	~~31000~~	E D
85-68-7	Butylbenzylphthalate	140,000	~~47000~~	E D
91-94-1	3,3'-Dichlorobenzidine		860	U
56-55-3	Benzo(a)Anthracene		1700	U
117-81-7	bis(2-Ethylhexyl)Phthalate	74000	~~40000~~	E D
218-01-9	Chrysene		860	U
117-84-0	Di-n-Octyl Phthalate	140,000	~~50000~~	E D
205-99-2	Benzo(b)Fluoranthene		860	U
207-08-9	Benzo(k)Fluoranthene	82,000	~~24000~~	E D
50-32-8	Benzo(a)Pyrene		860	U
193-39-5	Indeno(1,2,3-cd)Pyrene	94,000	~~21000~~	E D
53-70-3	Dibenz(a,h)Anthracene	73,000	~~10000~~	E D
191-24-2	Benzo(g,h,i)Perylene		11000	
		57,000	~~16000~~	E D

(1) - Cannot be separated from Diphenylamine

*[illegible] from BDN53DL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN56

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN56B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN56B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 23 dec. ____ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	24.70	4000	J
2.		UNKNOWN	27.80	10000	J
3.		UNKNOWN PNA	28.55	30000	J
4.		UNKNOWN PNA	28.75	20000	J
5.		UNKNOWN PNA	28.82	20000	J
6.		UNKNOWN PNA	30.48	10000	J
7.		UNKNOWN PNA	30.62	30000	J
8.		UNKNOWN PNA	31.73	20000	J
9.		UNKNOWN	31.92	10000	J
10.		UNKNOWN	32.03	20000	J
11.		UNKNOWN PNA	32.68	20000	J
12.		UNKNOWN PNA	33.10	7000	J
13.		UNKNOWN PNA	35.03	10000	J
14.		UNKNOWN PNA	35.77	7000	J
15.		UNKNOWN PNA	35.92	5000	J
16.		UNKNOWN	36.92	4000	J
17.		UNKNOWN PNA	38.18	4000	J
18.		UNKNOWN PNA	38.75	4000	J
19.		UNKNOWN PNA	38.85	5000	J
20.		UNKNOWN PNA	39.48	5000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN57BDL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BDN57BDL

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 dec. Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	150000	J
111-44-4	bis(2-Chloroethyl)Ether	240000	U J
95-57-8	2-Chlorophenol	240000	U
541-73-1	1,3-Dichlorobenzene	240000	U
106-46-7	1,4-Dichlorobenzene	240000	U
100-51-6	Benzyl Alcohol	240000	U
95-50-1	1,2-Dichlorobenzene	240000	U
95-48-7	2-Methylphenol	81000	J
39638-32-9	bis(2-Chloroisopropyl)Ether	240000	U J
106-44-5	4-Methylphenol	190000	J
621-64-7	N-Nitroso-Di-n-Propylamine	240000	U J
67-72-1	Hexachloroethane	240000	U
98-95-3	Nitrobenzene	240000	U
78-59-1	Isophorone	240000	U
88-75-5	2-Nitrophenol	240000	U
105-67-9	2,4-Dimethylphenol	130000	J
65-85-0	Benzoic Acid	1200000	U J
111-91-1	bis(2-Chloroethoxy)Methane	240000	U
120-83-2	2,4-Dichlorophenol	240000	U
120-82-1	1,2,4-Trichlorobenzene	240000	U
91-20-3	Naphthalene	10000 ~~7500000~~	~~E~~ D J
106-47-8	4-Chloroaniline	240000	U J
87-68-3	Hexachlorobutadiene	240000	U
59-50-7	4-Chloro-3-Methylphenol	240000	U
91-57-6	2-Methylnaphthalene	3300000	J
77-47-4	Hexachlorocyclopentadiene	240000	U J
88-06-2	2,4,6-Trichlorophenol	240000	U
95-95-4	2,4,5-Trichlorophenol	1200000	U
91-58-7	2-Chloronaphthalene	240000	U
88-74-4	2-Nitroaniline	1200000	U
131-11-3	Dimethyl Phthalate	240000	U
208-96-8	Acenaphthylene	2600000	J

BDN

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN57BDL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BDN57BDL

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 dec. Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1200000	U
83-32-9	Acenaphthene	460000	
51-28-5	2,4-Dinitrophenol	1200000	U
100-02-7	4-Nitrophenol	1200000	~~UR~~
132-64-9	Dibenzofuran	2300000	
121-14-2	2,4-Dinitrotoluene	240000	U
606-20-2	2,6-Dinitrotoluene	240000	U
84-66-2	Diethylphthalate	240000	U
7005-72-3	4-Chlorophenyl-phenylether	240000	U
86-73-7	Fluorene	2500000	
100-10-6	4-Nitroaniline	1200000	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200000	U
86-30-6	N-Nitrosodiphenylamine (1)	240000	U
101-55-3	4-Bromophenyl-phenylether	240000	U
118-74-1	Hexachlorobenzene	240000	U
87-86-5	Pentachlorophenol	1200000	~~UR~~
85-01-8	Phenanthrene	220,000 ~~7400000~~	~~E~~ DJ
120-12-7	Anthracene	2900000	
84-74-2	Di-n-Butylphthalate	240000	U
206-44-0	Fluoranthene	140,000 ~~4600000~~	~~E~~ DJ
129-00-0	Pyrene	140,000 ~~4400000~~	~~E~~ DJ
85-68-7	Butylbenzylphthalate	240000	U
91-94-1	3,3'-Dichlorobenzidine	480000	U
56-55-3	Benzo(a)Anthracene	2500000	
117-81-7	bis(2-Ethylhexyl)Phthalate	240000	U
218-01-9	Chrysene	2800000	
117-84-0	Di-n-Octyl Phthalate	240000	U
205-99-2	Benzo(b)Fluoranthene	1500000	
207-08-9	Benzo(k)Fluoranthene	1400000	
50-32-8	Benzo(a)Pyrene	1900000	
193-39-5	Indeno(1,2,3-cd)Pyrene	1000000	
53-70-3	Dibenz(a,h)Anthracene	570000	
191-24-2	Benzo(g,h,i)Perylene	870000	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN57BDL

Sample wt/vol: 1.0 (g/mL) G Lab File ID: BDN57BDL

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 dec. ____ Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 10

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKYL BENZENE	9.13	1000000	J
2.	95-15-8	BENZO[B] THIOPHENE	12.57	400000	J
3.	90-12-0	1-METHYL NAPHTHALENE	14.95	800000	J
4.	627-54-3	2-ETHENYL NAPHTHALENE	16.23	600000	J
5.		DIMETHYL NAPHTHALENE ISOMER	16.93	600000	J
6.		UNKNOWN ALKYL BENZENE	20.25	300000	J
7.		UNKNOWN ALKYL BENZENE	23.42	400000	J
8.		UNKNOWN PNA	24.20	300000	J
9.		UNKNOWN PNA	24.27	300000	J
10.		UNKNOWN	24.48	500000	J
11.		UNKNOWN PNA	26.70	300000	J
12.		UNKNOWN PNA	27.17	500000	J
13.		UNKNOWN PNA	28.28	400000	J
14.		UNKNOWN PNA	28.50	300000	J
15.		UNKNOWN PNA	32.40	100000	J
16.		UNKNOWN PNA	32.63	200000	J
17.		UNKNOWN PNA	32.80	400000	J
18.		UNKNOWN PNA	34.62	700000	J
19.		UNKNOWN PNA	35.07	100000	J
20.		UNKNOWN PNA	37.83	200000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN58

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN58B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN58B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	790	U
111-44-4	bis(2-Chloroethyl)Ether	790	U
95-57-8	2-Chlorophenol	790	U
541-73-1	1,3-Dichlorobenzene	790	U
106-46-7	1,4-Dichlorobenzene	790	U
100-51-6	Benzyl Alcohol	790	U
95-50-1	1,2-Dichlorobenzene	790	U
95-48-7	2-Methylphenol	790	U
39638-32-9	bis(2-Chloroisopropyl)Ether	790	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitroso-Di-n-Propylamine	790	U
67-72-1	Hexachloroethane	790	U
98-95-3	Nitrobenzene	790	U
78-59-1	Isophorone	790	U
88-75-5	2-Nitrophenol	790	U
105-67-9	2,4-Dimethylphenol	790	U
65-85-0	Benzoic Acid	3800	U
111-91-1	bis(2-Chloroethoxy)Methane	790	U
120-83-2	2,4-Dichlorophenol	790	U
120-82-1	1,2,4-Trichlorobenzene	790	U
91-20-3	Naphthalene	790	U
106-47-8	4-Chloroaniline	790	U
87-68-3	Hexachlorobutadiene	790	U
59-50-7	4-Chloro-3-Methylphenol	790	U
91-57-6	2-Methylnaphthalene	790	U
77-47-4	Hexachlorocyclopentadiene	790	U
88-06-2	2,4,6-Trichlorophenol	790	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	790	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethyl Phthalate	790	U
208-96-8	Acenaphthylene	790	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN58

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN58B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN58B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	790	U
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	790	U
121-14-2	2,4-Dinitrotoluene	790	U
606-20-2	2,6-Dinitrotoluene	790	U
84-66-2	Diethylphthalate	790	U
7005-72-3	4-Chlorophenyl-phenylether	790	U
86-73-7	Fluorene	790	U
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	790	U
101-55-3	4-Bromophenyl-phenylether	790	U
118-74-1	Hexachlorobenzene	790	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	790	U
120-12-7	Anthracene	790	U
84-74-2	Di-n-Butylphthalate	790	U
206-44-0	Fluoranthene	790	U
129-00-0	Pyrene	790	U
85-68-7	Butylbenzylphthalate	790	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	790	U
117-81-7	bis(2-Ethylhexyl)Phthalate	790	U
218-01-9	Chrysene	790	U
117-84-0	Di-n-Octyl Phthalate	790	U
205-99-2	Benzo(b)Fluoranthene	790	U
207-08-9	Benzo(k)Fluoranthene	790	U
50-32-8	Benzo(a)Pyrene	790	U
193-39-5	Indeno(1,2,3-cd)Pyrene	790	U
53-70-3	Dibenz(a,h)Anthracene	790	U
191-24-2	Benzo(g,h,i)Perylene	790	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN58

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN58B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN58B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. ____ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 1.0

Number TICs found: 19

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	_____	UNKNOWN	5.62	1000	J
2.	_____	UNKNOWN	6.72	1000	J
3.	_____	UNKNOWN	7.00	500	J
4.	_____	UNKNOWN	8.07	2000	J
5.	10544-50-0	SULFUR	26.13	7000	J
6.	_____	UNKNOWN	31.45	400	J
7.	_____	UNKNOWN ALKANE	35.62	200	J
8.	_____	UNKNOWN	35.78	1000	J
9.	_____	UNKNOWN	36.60	400	J
10.	_____	UNKNOWN	36.73	600	J
11.	_____	UNKNOWN	37.20	400	J
12.	_____	UNKNOWN	37.30	300	J
13.	_____	UNKNOWN ALKANE	37.40	300	J
14.	_____	UNKNOWN	37.58	200	J
15.	_____	UNKNOWN	38.03	200	J
16.	_____	UNKNOWN	39.03	200	J
17.	_____	UNKNOWN	39.35	3000	J
18.	_____	UNKNOWN	39.55	3000	J
19.	_____	UNKNOWN	39.75	300	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE

BDN59

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN59B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN59B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 10 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 7.4

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730	U
111-44-4	bis(2-Chloroethyl)Ether	730	U
95-57-8	2-Chlorophenol	730	U
541-73-1	1,3-Dichlorobenzene	730	U
106-46-7	1,4-Dichlorobenzene	730	U
100-51-6	Benzyl Alcohol	730	U
95-50-1	1,2-Dichlorobenzene	730	U
95-48-7	2-Methylphenol	730	U
39638-32-9	bis(2-Chloroisopropyl)Ether	730	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-Di-n-Propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
65-85-0	Benzoic Acid	730	U
111-91-1	bis(2-Chloroethoxy)Methane	3600	U
120-83-2	2,4-Dichlorophenol	730	U
120-82-1	1,2,4-Trichlorobenzene	730	U
91-20-3	Naphthalene	730	U
106-47-8	4-Chloroaniline	130	J
87-68-3	Hexachlorobutadiene	730	U
59-50-7	4-Chloro-3-Methylphenol	730	U
91-57-6	2-Methylnaphthalene	730	U
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	730	U
91-58-7	2-Chloronaphthalene	3600	U
88-74-4	2-Nitroaniline	730	U
131-11-3	Dimethyl Phthalate	3600	U
208-96-8	Acenaphthylene	730	U
		100	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDN59

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN59B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN59B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 10 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 7.4

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	110	J
51-28-5	2,4-Dinitrophenol	3600	U
100-02-7	4-Nitrophenol	3600	~~U~~
132-64-9	Dibenzofuran	730	U
121-14-2	2,4-Dinitrotoluene	730	U
606-20-2	2,6-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
7005-72-3	4-Chlorophenyl-phenylether	730	U
86-73-7	Fluorene	730	U
100-10-6	4-Nitroaniline	730	U
534-52-1	4,6-Dinitro-2-Methylphenol	3600	U
86-30-6	N-Nitrosodiphenylamine (1)	3600	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
87-86-5	Pentachlorophenol	730	U
85-01-8	Phenanthrene	3600	U
120-12-7	Anthracene	740	
84-74-2	Di-n-Butylphthalate	290	J
206-44-0	Fluoranthene	730	U
129-00-0	Pyrene	2300	
85-68-7	Butylbenzylphthalate	2900	
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	1500	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1600	
218-01-9	Chrysene	730	U
117-84-0	Di-n-Octyl Phthalate	1500	
205-99-2	Benzo(b)Fluoranthene	730	U
207-08-9	Benzo(k)Fluoranthene	1700	
50-32-8	Benzo(a)Pyrene	730	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1200	
53-70-3	Dibenz(a,h)Anthracene	1000	
191-24-2	Benzo(g,h,i)Perylene	480	J
		830	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN59

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN59B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN59B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 10 dec. ____ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/07/90

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 1.0

Number TICs found: 7

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	_____	UNKNOWN	6.68	500	J
2.	_____	UNKNOWN	8.05	800	J
3.	_____	UNKNOWN	27.18	400	J
4.	_____	UNKNOWN PNA	28.30	400	J
5.	_____	UNKNOWN PNA	30.37	300	J
6.	_____	UNKNOWN PNA	34.60	400	J
7.	_____	UNKNOWN PNA	35.03	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN60B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN60B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	770	U
111-44-4	bis(2-Chloroethyl)Ether	770	U
95-57-8	2-Chlorophenol	770	U
541-73-1	1,3-Dichlorobenzene	770	U
106-46-7	1,4-Dichlorobenzene	770	U
100-51-6	Benzyl Alcohol	770	U
95-50-1	1,2-Dichlorobenzene	770	U
95-48-7	2-Methylphenol	770	U
39638-32-9	bis(2-Chloroisopropyl)Ether	770	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitroso-Di-n-Propylamine	770	U
67-72-1	Hexachloroethane	770	U
98-95-3	Nitrobenzene	770	U
78-59-1	Isophorone	770	U
88-75-5	2-Nitrophenol	770	U
105-67-9	2,4-Dimethylphenol	770	U
65-85-0	Benzoic Acid	770	U
111-91-1	bis(2-Chloroethoxy)Methane	3700	U
120-83-2	2,4-Dichlorophenol	770	U
120-82-1	1,2,4-Trichlorobenzene	770	U
91-20-3	Naphthalene	770	U
106-47-8	4-Chloroaniline	950	
87-68-3	Hexachlorobutadiene	770	U
59-50-7	4-Chloro-3-Methylphenol	770	U
91-57-6	2-Methylnaphthalene	770	U
77-47-4	Hexachlorocyclopentadiene	310	J
88-06-2	2,4,6-Trichlorophenol	770	U
95-95-4	2,4,5-Trichlorophenol	770	U
91-58-7	2-Chloronaphthalene	3700	U
88-74-4	2-Nitroaniline	770	U
131-11-3	Dimethyl Phthalate	3700	U
208-96-8	Acenaphthylene	770	U
		2300	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN60B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN60B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3700	U
83-32-9	Acenaphthene	750	J
51-28-5	2,4-Dinitrophenol	3700	U
100-02-7	4-Nitrophenol	3700	U
132-64-9	Dibenzofuran	740	J
121-14-2	2,4-Dinitrotoluene	770	U
606-20-2	2,6-Dinitrotoluene	770	U
84-66-2	Diethylphthalate	770	U
7005-72-3	4-Chlorophenyl-phenylether	770	U
86-73-7	Fluorene	1400	
100-10-6	4-Nitroaniline	3700	U
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U
86-30-6	N-Nitrosodiphenylamine (1)	770	U
101-55-3	4-Bromophenyl-phenylether	770	U
118-74-1	Hexachlorobenzene	770	U
87-86-5	Pentachlorophenol	3700	U
85-01-8	Phenanthrene	11000	
120-12-7	Anthracene	3800	
84-74-2	Di-n-Butylphthalate	770	U
206-44-0	Fluoranthene	27,000 ~~18000~~	~~E~~ D*
129-00-0	Pyrene	26,000 ~~20000~~	~~E~~ D
85-68-7	Butylbenzylphthalate	770	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	14,000 ~~14000~~	~~E~~ D
117-81-7	bis(2-Ethylhexyl)Phthalate	770	U
218-01-9	Chrysene	22,000 ~~13000~~	~~E~~ D
117-84-0	Di-n-Octyl Phthalate	770	U
205-99-2	Benzo(b)Fluoranthene	14,000 ~~13000~~	~~E~~ D
207-08-9	Benzo(k)Fluoranthene	7600	
50-32-8	Benzo(a)Pyrene	9600	
193-39-5	Indeno(1,2,3-cd)Pyrene	8700	
53-70-3	Dibenz(a,h)Anthracene	6000	
191-24-2	Benzo(g,h,i)Perylene	8400	

(1) - Cannot be separated from Diphenylamine *

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN60

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN60B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN60B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN PNA	24.32	1000	J
2.		UNKNOWN PNA	24.62	1000	J
3.		UNKNOWN	25.35	1000	J
4.		UNKNOWN PNA	28.43	2000	J
5.		UNKNOWN PNA	28.63	900	J
6.		UNKNOWN PNA	28.70	900	J
7.		UNKNOWN PNA	28.98	800	J
8.		UNKNOWN	30.37	800	J
9.		UNKNOWN PNA	30.50	2000	J
10.		UNKNOWN	30.63	900	J
11.		UNKNOWN PNA	31.55	2000	J
12.		UNKNOWN PNA	31.88	1000	J
13.		UNKNOWN PNA	32.57	1000	J
14.		UNKNOWN PNA	32.97	1000	J
15.		UNKNOWN PNA	34.83	2000	J
16.		UNKNOWN PNA	35.28	2000	J
17.		UNKNOWN PNA	35.67	3000	J
18.		UNKNOWN PNA	38.05	3000	J
19.		UNKNOWN PNA	38.68	1000	J
20.		UNKNOWN PNA	39.27	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN61

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN61B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN61B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 17 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	800	U
111-44-4	bis(2-Chloroethyl)Ether	800	U
95-57-8	2-Chlorophenol	800	U
541-73-1	1,3-Dichlorobenzene	800	U
106-46-7	1,4-Dichlorobenzene	800	U
100-51-6	Benzyl Alcohol	800	U
95-50-1	1,2-Dichlorobenzene	800	U
95-48-7	2-Methylphenol	800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	800	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitroso-Di-n-Propylamine	800	U
67-72-1	Hexachloroethane	800	U
98-95-3	Nitrobenzene	800	U
78-59-1	Isophorone	800	U
88-75-5	2-Nitrophenol	800	U
105-67-9	2,4-Dimethylphenol	800	U
65-85-0	Benzoic Acid	3900	U
111-91-1	bis(2-Chloroethoxy)Methane	800	U
120-83-2	2,4-Dichlorophenol	800	U
120-82-1	1,2,4-Trichlorobenzene	800	U
91-20-3	Naphthalene	1300	
106-47-8	4-Chloroaniline	800	U
87-68-3	Hexachlorobutadiene	800	U
59-50-7	4-Chloro-3-Methylphenol	800	U
91-57-6	2-Methylnaphthalene	320	J
77-47-4	Hexachlorocyclopentadiene	800	U
88-06-2	2,4,6-Trichlorophenol	800	U
95-95-4	2,4,5-Trichlorophenol	3900	U
91-58-7	2-Chloronaphthalene	800	U
88-74-4	2-Nitroaniline	3900	U
131-11-3	Dimethyl Phthalate	800	U
208-96-8	Acenaphthylene	3700	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDN61

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN61B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN61B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 17 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3900	U
83-32-9	Acenaphthene	480	J
51-28-5	2,4-Dinitrophenol	3900	U
100-02-7	4-Nitrophenol	3900	U
132-64-9	Dibenzofuran	860	
121-14-2	2,4-Dinitrotoluene	800	U
606-20-2	2,6-Dinitrotoluene	800	U
84-66-2	Diethylphthalate	800	U
7005-72-3	4-Chlorophenyl-phenylether	800	U
86-73-7	Fluorene	1700	
100-10-6	4-Nitroaniline	3900	U
534-52-1	4,6-Dinitro-2-Methylphenol	3900	U
86-30-6	N-Nitrosodiphenylamine (1)	800	U
101-55-3	4-Bromophenyl-phenylether	800	U
118-74-1	Hexachlorobenzene	800	U
87-86-5	Pentachlorophenol	3900	U
85-01-8	Phenanthrene	20,000 ~~17000~~	~~E~~ D
120-12-7	Anthracene	5200	
84-74-2	Di-n-Butylphthalate	800	U
206-44-0	Fluoranthene	34,000 ~~23000~~	~~E~~ D
129-00-0	Pyrene	32,000 ~~24000~~	~~E~~ D
85-68-7	Butylbenzylphthalate	800	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	16,000 ~~17000~~	~~E~~ D
117-81-7	bis(2-Ethylhexyl)Phthalate	800	U
218-01-9	Chrysene	27,000 ~~29000~~	~~E~~ D
117-84-0	Di-n-Octyl Phthalate	800	U
205-99-2	Benzo(b)Fluoranthene	16,000 ~~17000~~	~~E~~ D
207-08-9	Benzo(k)Fluoranthene	800	U
50-32-8	Benzo(a)Pyrene	4100	
193-39-5	Indeno(1,2,3-cd)Pyrene	8900	
53-70-3	Dibenz(a,h)Anthracene	5100	
191-24-2	Benzo(g,h,i)Perylene	8000	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN61

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN61B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN61B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 17 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/08/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN PNA	24.33	1000	J
2.		UNKNOWN PNA	24.63	2000	J
3.		UNKNOWN PNA	25.37	1000	J
4.		UNKNOWN PNA	26.88	1000	J
5.		UNKNOWN PNA	28.45	2000	J
6.		UNKNOWN PNA	28.67	1000	J
7.		UNKNOWN PNA	28.73	1000	J
8.		UNKNOWN PNA	30.53	3000	J
9.		UNKNOWN PNA	31.58	2000	J
10.		UNKNOWN	31.92	1000	J
11.		UNKNOWN PNA	32.60	1000	J
12.		UNKNOWN	32.98	1000	J
13.		UNKNOWN PNA	34.87	2000	J
14.		UNKNOWN	35.17	1000	J
15.		UNKNOWN PNA	35.32	2000	J
16.		UNKNOWN PNA	35.53	4000	J
17.		UNKNOWN PNA	35.70	3000	J
18.		UNKNOWN	35.85	1000	J
19.		UNKNOWN	38.72	1000	J
20.		UNKNOWN PNA	39.30	1000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN62

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN62BR

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN62BR

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 18 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 8.4

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	800	U
111-44-4	bis(2-Chloroethyl)Ether	800	U
95-57-8	2-Chlorophenol	800	U
541-73-1	1,3-Dichlorobenzene	800	U
106-46-7	1,4-Dichlorobenzene	800	U
100-51-6	Benzyl Alcohol	800	U
95-50-1	1,2-Dichlorobenzene	800	U
95-48-7	2-Methylphenol	800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	800	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitroso-Di-n-Propylamine	800	U
67-72-1	Hexachloroethane	800	U
98-95-3	Nitrobenzene	800	U
78-59-1	Isophorone	800	U
88-75-5	2-Nitrophenol	800	U
105-67-9	2,4-Dimethylphenol	800	U
65-85-0	Benzoic Acid	800	U
111-91-1	bis(2-Chloroethoxy)Methane	3900	U
120-83-2	2,4-Dichlorophenol	800	U
120-82-1	1,2,4-Trichlorobenzene	800	U
91-20-3	Naphthalene	800	U
106-47-8	4-Chloroaniline	640	J
87-68-3	Hexachlorobutadiene	800	U
59-50-7	4-Chloro-3-Methylphenol	800	U
91-57-6	2-Methylnaphthalene	800	U
77-47-4	Hexachlorocyclopentadiene	200	J
88-06-2	2,4,6-Trichlorophenol	800	U
95-95-4	2,4,5-Trichlorophenol	800	U
91-58-7	2-Chloronaphthalene	3900	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethyl Phthalate	3900	U
208-96-8	Acenaphthylene	800	U
		2100	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN62

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN62BR

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN62BR

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 18 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 8.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3900	U
83-32-9	Acenaphthene	250	J
51-28-5	2,4-Dinitrophenol	3900	U
100-02-7	4-Nitrophenol	3900	U
132-64-9	Dibenzofuran	350	J
121-14-2	2,4-Dinitrotoluene	800	U
606-20-2	2,6-Dinitrotoluene	800	U
84-66-2	Diethylphthalate	800	U
7005-72-3	4-Chlorophenyl-phenylether	800	U
86-73-7	Fluorene	710	J
100-10-6	4-Nitroaniline	3900	~~U~~ R
534-52-1	4,6-Dinitro-2-Methylphenol	3900	U
86-30-6	N-Nitrosodiphenylamine (1)	800	U
101-55-3	4-Bromophenyl-phenylether	800	U
118-74-1	Hexachlorobenzene	800	U
87-86-5	Pentachlorophenol	3900	U
85-01-8	Phenanthrene	7900	
120-12-7	Anthracene	1700	
84-74-2	Di-n-Butylphthalate	160	J
206-44-0	Fluoranthene	12000	
129-00-0	Pyrene	9200	
85-68-7	Butylbenzylphthalate	800	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	12000	
117-81-7	bis(2-Ethylhexyl)Phthalate	800	U
218-01-9	Chrysene	12000	
117-84-0	Di-n-Octyl Phthalate	800	U
205-99-2	Benzo(b)Fluoranthene	16000	E
207-08-9	Benzo(k)Fluoranthene	800	U
50-32-8	Benzo(a)Pyrene	9000	
193-39-5	Indeno(1,2,3-cd)Pyrene	8200	
53-70-3	Dibenz(a,h)Anthracene	3500	
191-24-2	Benzo(g,h,i)Perylene	8400	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN62

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN62BR

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN62BR

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 18 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 8.4 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	_____	UNKNOWN SILOXANE	25.57	20000	J
2.	10544-50-0	SULFUR	25.87	2000	J
3.	_____	UNKNOWN	25.95	2000	J
4.	_____	UNKNOWN PNA	26.32	4000	J
5.	_____	UNKNOWN PNA	26.97	4000	J
6.	_____	UNKNOWN	27.82	10000	J
7.	_____	UNKNOWN	28.03	1000	J
8.	_____	UNKNOWN	29.92	1000	J
9.	_____	UNKNOWN	30.35	1000	J
10.	_____	UNKNOWN	32.00	2000	J
11.	_____	UNKNOWN PHTHALATE	32.10	5000	J
12.	_____	UNKNOWN	34.63	3000	J
13.	_____	UNKNOWN	35.10	3000	J
14.	_____	UNKNOWN	35.47	3000	J
15.	_____	UNKNOWN ALKANE	35.57	3000	J
16.	_____	UNKNOWN	36.98	3000	J
17.	_____	UNKNOWN ALKANE	37.35	3000	J
18.	_____	UNKNOWN	37.58	9000	J
19.	_____	UNKNOWN	37.75	4000	J
20.	_____	UNKNOWN	39.42	6000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN63B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN63B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	750	U
111-44-4	bis(2-Chloroethyl)Ether	750	U
95-57-8	2-Chlorophenol	750	U
541-73-1	1,3-Dichlorobenzene	750	U
106-46-7	1,4-Dichlorobenzene	750	U
100-51-6	Benzyl Alcohol	750	U
95-50-1	1,2-Dichlorobenzene	750	U
95-48-7	2-Methylphenol	750	U
39638-32-9	bis(2-Chloroisopropyl)Ether	750	U
106-44-5	4-Methylphenol	750	U
621-64-7	N-Nitroso-Di-n-Propylamine	750	U
67-72-1	Hexachloroethane	750	U
98-95-3	Nitrobenzene	750	U
78-59-1	Isophorone	750	U
88-75-5	2-Nitrophenol	750	U
105-67-9	2,4-Dimethylphenol	750	U
65-85-0	Benzoic Acid	750	U
111-91-1	bis(2-Chloroethoxy)Methane	3600	U
120-83-2	2,4-Dichlorophenol	750	U
120-82-1	1,2,4-Trichlorobenzene	750	U
91-20-3	Naphthalene	750	U
106-47-8	4-Chloroaniline	610	J
87-68-3	Hexachlorobutadiene	750	U
59-50-7	4-Chloro-3-Methylphenol	750	U
91-57-6	2-Methylnaphthalene	750	U
77-47-4	Hexachlorocyclopentadiene	190	J
88-06-2	2,4,6-Trichlorophenol	750	U
95-95-4	2,4,5-Trichlorophenol	750	U
91-58-7	2-Chloronaphthalene	3600	U
88-74-4	2-Nitroaniline	750	U
131-11-3	Dimethyl Phthalate	3600	U
208-96-8	Acenaphthylene	750	U
		990	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN63B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN63B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	330	J
51-28-5	2,4-Dinitrophenol	3600	U
100-02-7	4-Nitrophenol	3600	U
132-64-9	Dibenzofuran	300	J
121-14-2	2,4-Dinitrotoluene	750	U
606-20-2	2,6-Dinitrotoluene	750	U
84-66-2	Diethylphthalate	750	U
7005-72-3	4-Chlorophenyl-phenylether	750	U
86-73-7	Fluorene	410	J
100-10-6	4-Nitroaniline	3600	U
534-52-1	4,6-Dinitro-2-Methylphenol	3600	U
86-30-6	N-Nitrosodiphenylamine (1)	750	U
101-55-3	4-Bromophenyl-phenylether	750	U
118-74-1	Hexachlorobenzene	750	U
87-86-5	Pentachlorophenol	3600	U
85-01-8	Phenanthrene	5200	
120-12-7	Anthracene	1300	
84-74-2	Di-n-Butylphthalate	750	U
206-44-0	Fluoranthene	12000	~~E~~ J
129-00-0	Pyrene	8400	
85-68-7	Butylbenzylphthalate	750	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	7100	
117-81-7	bis(2-Ethylhexyl)Phthalate	750	U
218-01-9	Chrysene	9200	
117-84-0	Di-n-Octyl Phthalate	750	U
205-99-2	Benzo(b)Fluoranthene	8400	
207-08-9	Benzo(k)Fluoranthene	3800	
50-32-8	Benzo(a)Pyrene	6100	
193-39-5	Indeno(1,2,3-cd)Pyrene	5200	
53-70-3	Dibenz(a,h)Anthracene	2200	
191-24-2	Benzo(g,h,i)Perylene	3900	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN63B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN63B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	25.15	2000	J N
2.		UNKNOWN PNA	27.48	800	J
3.		UNKNOWN	27.70	1000	J
4.		UNKNOWN PNA	28.20	1000	J
5.		UNKNOWN PNA	30.28	2000	J
6.		UNKNOWN PNA	31.30	1000	J
7.		UNKNOWN PHTHALATE	32.03	1000	J
8.		UNKNOWN PNA	32.35	1000	J
9.		UNKNOWN PNA	34.58	2000	J
10.		UNKNOWN PNA	35.03	4000	J
11.		UNKNOWN PNA	35.40	3000	J
12.		UNKNOWN ALKANE	35.50	1000	J
13.		UNKNOWN	36.48	900	J
14.		UNKNOWN ALKANE	37.28	1000	J
15.		UNKNOWN	37.52	2000	J
16.		UNKNOWN	37.68	900	J
17.		UNKNOWN PNA	37.82	900	J
18.		UNKNOWN PNA	38.45	1000	J
19.		UNKNOWN PNA	38.95	1000	J
20.		UNKNOWN	39.35	1000	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64RE

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN64BRE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN64BRE

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 9 dec. ____ Date Extracted: 07/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730	U R
111-44-4	bis(2-Chloroethyl)Ether	730	U
95-57-8	2-Chlorophenol	730	U
541-73-1	1,3-Dichlorobenzene	730	U
106-46-7	1,4-Dichlorobenzene	730	U
100-51-6	Benzyl Alcohol	730	U
95-50-1	1,2-Dichlorobenzene	730	U
95-48-7	2-Methylphenol	730	U
39638-32-9	bis(2-Chloroisopropyl)Ether	730	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-Di-n-Propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
65-85-0	Benzoic Acid	730	U
111-91-1	bis(2-Chloroethoxy)Methane	3500	U
120-83-2	2,4-Dichlorophenol	730	U
120-82-1	1,2,4-Trichlorobenzene	730	U
91-20-3	Naphthalene	730	U
106-47-8	4-Chloroaniline	580	J
87-68-3	Hexachlorobutadiene	730	U R
59-50-7	4-Chloro-3-Methylphenol	730	U
91-57-6	2-Methylnaphthalene	730	U
77-47-4	Hexachlorocyclopentadiene	110	J
88-06-2	2,4,6-Trichlorophenol	730	U R
95-95-4	2,4,5-Trichlorophenol	730	U
91-58-7	2-Chloronaphthalene	3500	U
88-74-4	2-Nitroaniline	730	U
131-11-3	Dimethyl Phthalate	3500	U
208-96-8	Acenaphthylene	730	U
		630	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64RE

b Name: ENCOTEC-AA

Contract: 68-D9-0033

ab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL

mple wt/vol: 30.0 (g/mL) G

Lab Sample ID: BDN64BRE

evel: (low/med) LOW

Lab File ID: BDN64BRE

oisture: not dec. 9 dec. ____

Date Received: 06/13/90

raction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/10/90

C Cleanup: (Y/N) Y pH: 7.6

Date Analyzed: 07/11/90

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3500	~~U~~ R
83-32-9	Acenaphthene	180	J
51-28-5	2,4-Dinitrophenol	3500	~~U~~ R
100-02-7	4-Nitrophenol	3500	~~U~~ R
132-64-9	Dibenzofuran	190	J
121-14-2	2,4-Dinitrotoluene	730	U R
606-20-2	2,6-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
7005-72-3	4-Chlorophenyl-phenylether	730	U
86-73-7	Fluorene	360	J
100-10-6	4-Nitroaniline	3500	U
534-52-1	4,6-Dinitro-2-Methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	730	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
87-86-5	Pentachlorophenol	3500	U R
85-01-8	Phenanthrene	3700	U
120-12-7	Anthracene	1200	U
84-74-2	Di-n-Butylphthalate	150	J
206-44-0	Fluoranthene	7900	U
129-00-0	Pyrene	5700	U
85-68-7	Butylbenzylphthalate	730	~~U~~ R
91-94-1	3,3'-Dichlorobenzidine	1500	~~U~~ R
56-55-3	Benzo(a)Anthracene	3600	U
117-81-7	bis(2-Ethylhexyl)Phthalate	260	J
218-01-9	Chrysene	4400	U
117-84-0	Di-n-Octyl Phthalate	730	~~U~~ R
205-99-2	Benzo(b)Fluoranthene	5100	U
207-08-9	Benzo(k)Fluoranthene	2500	U
50-32-8	Benzo(a)Pyrene	3600	U
193-39-5	Indeno(1,2,3-cd)Pyrene	2700	U
53-70-3	Dibenz(a,h)Anthracene	1100	U
191-24-2	Benzo(g,h,i)Perylene	2100	U

1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN65

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN65B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN65B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 14 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	770	U
111-44-4	bis(2-Chloroethyl)Ether	770	U
95-57-8	2-Chlorophenol	770	U
541-73-1	1,3-Dichlorobenzene	770	U
106-46-7	1,4-Dichlorobenzene	770	U
100-51-6	Benzyl Alcohol	770	U
95-50-1	1,2-Dichlorobenzene	770	U
95-48-7	2-Methylphenol	770	U
39638-32-9	bis(2-Chloroisopropyl)Ether	770	U
106-44-5	4-Methylphenol	770	U
621-64-7	N-Nitroso-Di-n-Propylamine	770	U
67-72-1	Hexachloroethane	770	U
98-95-3	Nitrobenzene	770	U
78-59-1	Isophorone	770	U
88-75-5	2-Nitrophenol	770	U
105-67-9	2,4-Dimethylphenol	770	U
65-85-0	Benzoic Acid	770	U
111-91-1	bis(2-Chloroethoxy)Methane	3700	U
120-83-2	2,4-Dichlorophenol	770	U
120-82-1	1,2,4-Trichlorobenzene	770	U
91-20-3	Naphthalene	770	U
106-47-8	4-Chloroaniline	770	U
87-68-3	Hexachlorobutadiene	770	U
59-50-7	4-Chloro-3-Methylphenol	770	U
91-57-6	2-Methylnaphthalene	770	U
77-47-4	Hexachlorocyclopentadiene	770	U
88-06-2	2,4,6-Trichlorophenol	770	U
95-95-4	2,4,5-Trichlorophenol	770	U
91-58-7	2-Chloronaphthalene	3700	U
88-74-4	2-Nitroaniline	770	U
131-11-3	Dimethyl Phthalate	3700	U
208-96-8	Acenaphthylene	770	U

Amended

1C

Elizabeth CG #2

~~SEMIVOLA~~TILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN65

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN65B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN65B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 14 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.8

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
99-09-2	3-Nitroaniline	3700	U	
83-32-9	Acenaphthene	770	U	
51-28-5	2,4-Dinitrophenol	3700	U	
100-02-7	4-Nitrophenol	3700	U	
132-64-9	Dibenzofuran	770	U	
121-14-2	2,4-Dinitrotoluene	770	U	
606-20-2	2,6-Dinitrotoluene	770	U	
84-66-2	Diethylphthalate	770	U	
7005-72-3	4-Chlorophenyl-phenylether	770	U	
86-73-7	Fluorene	770	U	
100-10-6	4-Nitroaniline	3700	U	
534-52-1	4,6-Dinitro-2-Methylphenol	3700	U	
86-30-6	N-Nitrosodiphenylamine (1)	770	U	
101-55-3	4-Bromophenyl-phenylether	770	U	
118-74-1	Hexachlorobenzene	770	U	
87-86-5	Pentachlorophenol	3700	U	
85-01-8	Phenanthrene	770	U	
120-12-7	Anthracene	770	U	
84-74-2	Di-n-Butylphthalate	~~770~~	~~U~~	
206-44-0	Fluoranthene	~~22~~	~~J~~	770 U
129-00-0	Pyrene	770	U	
85-68-7	Butylbenzylphthalate	770	U	
91-94-1	3,3'-Dichlorobenzidine	1500	U	
56-55-3	Benzo(a)Anthracene	770	U	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~56~~	~~J~~	770 U
218-01-9	Chrysene	770	U	
117-84-0	Di-n-Octyl Phthalate	770	U	THIN
205-99-2	Benzo(b)Fluoranthene	770	U	
207-08-9	Benzo(k)Fluoranthene	770	U	8-29-90
50-32-8	Benzo(a)Pyrene	770	U	
193-39-5	Indeno(1,2,3-cd)Pyrene	770	U	
53-70-3	Dibenz(a,h)Anthracene	770	U	
191-24-2	Benzo(g,h,i)Perylene	770	U	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1/87 Rev.

002238

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN65

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN65B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN65B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.8 Dilution Factor: 1.0

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. _____	UNKNOWN	5.52	600	JN
2. 10544-50-0	SULFUR	26.05	4000	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN66

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN66B

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN66B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 15 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.7

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	780	U
111-44-4	bis(2-Chloroethyl)Ether	780	U
95-57-8	2-Chlorophenol	780	U
541-73-1	1,3-Dichlorobenzene	780	U
106-46-7	1,4-Dichlorobenzene	780	U
100-51-6	Benzyl Alcohol	780	U
95-50-1	1,2-Dichlorobenzene	780	U
95-48-7	2-Methylphenol	780	U
39638-32-9	bis(2-Chloroisopropyl)Ether	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-Di-n-Propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
65-85-0	Benzoic Acid	780	U
111-91-1	bis(2-Chloroethoxy)Methane	3800	U
120-83-2	2,4-Dichlorophenol	780	U
120-82-1	1,2,4-Trichlorobenzene	780	U
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	570	J
87-68-3	Hexachlorobutadiene	780	U
59-50-7	4-Chloro-3-Methylphenol	780	U
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	310	J
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	780	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	780	U
131-11-3	Dimethyl Phthalate	3800	U
208-96-8	Acenaphthylene	780	U
		680	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN66

b Name: ENCOTEC-AA

Contract: 68-D9-0033

ab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

trix: (soil/water) SOIL

Lab Sample ID: BDN66B

ample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN66B

evel: (low/med) LOW

Date Received: 06/13/90

Moisture: not dec. 15 dec.

Date Extracted: 06/17/90

xtraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

C Cleanup: (Y/N) Y pH: 7.7

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	320	J
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	580	J
121-14-2	2,4-Dinitrotoluene	780	U
606-20-2	2,6-Dinitrotoluene	780	U
84-66-2	Diethylphthalate	780	U
7005-72-3	4-Chlorophenyl-phenylether	780	U
86-73-7	Fluorene	590	J
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	780	U
101-55-3	4-Bromophenyl-phenylether	780	U
118-74-1	Hexachlorobenzene	780	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	10000	
120-12-7	Anthracene	700	J
84-74-2	Di-n-Butylphthalate	780	U
206-44-0	Fluoranthene	9600	
129-00-0	Pyrene	8800	
85-68-7	Butylbenzylphthalate	83	J
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)Anthracene	3600	
117-81-7	bis(2-Ethylhexyl)Phthalate	780	U
218-01-9	Chrysene	5400	
117-84-0	Di-n-Octyl Phthalate	780	U
205-99-2	Benzo(b)Fluoranthene	5000	
207-08-9	Benzo(k)Fluoranthene	780	U
50-32-8	Benzo(a)Pyrene	3300	
193-39-5	Indeno(1,2,3-cd)Pyrene	2500	
53-70-3	Dibenz(a,h)Anthracene	940	
191-24-2	Benzo(g,h,i)Perylene	3000	

(1) - Cannot be separated from Diphenylamine

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDN66

Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN66B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN66B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 dec. ____ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 1.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	21.98	400	J
2.		UNKNOWN PNA	24.22	600	J
3.		UNKNOWN PNA	24.28	700	J
4.		UNKNOWN PNA	24.50	600	J
5.		UNKNOWN PNA	24.62	400	J
6.		UNKNOWN	25.23	1000	J
7.		UNKNOWN	26.12	400	J
8.		UNKNOWN PNA	27.18	1000	J
9.		UNKNOWN PNA	27.60	500	J
10.		UNKNOWN PNA	28.30	700	J
11.		UNKNOWN PNA	28.58	500	J
12.		UNKNOWN PNA	30.37	600	J
13.		UNKNOWN PNA	30.63	400	J
14.		UNKNOWN PNA	32.42	800	J
15.		UNKNOWN PNA	34.62	2000	J
16.		UNKNOWN PNA	35.07	1000	J
17.		UNKNOWN ALKANE	35.57	400	J
18.		UNKNOWN	35.72	3000	J
19.		UNKNOWN ALKANE	37.37	400	J
20.		UNKNOWN PNA	37.85	2000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN69

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) WATER

Lab Sample ID: BDN69B

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: BDN69B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. dec.

Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	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	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
		10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMP

BDN69

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) WATER Lab Sample ID: BDN69B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BDN69B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. dec. Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
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
100-10-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	50	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	50	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	10	U
56-55-3	Benzo(a)Anthracene	20	U
117-81-7	bis(2-Ethylhexyl)Phthalate	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	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN70

b Name: ENCOTEC-AA

Contract: 68-D9-0033

b Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

atrix: (soil/water) WATER

Lab Sample ID: BDN70B

mple wt/vol: 1000 (g/mL) ML

Lab File ID: BDN70B

evel: (low/med) LOW

Date Received: 06/13/90

Moisture: not dec. dec.

Date Extracted: 06/15/90

traction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 07/06/90

PC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	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	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
		10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN70

Name: ENCOTEC-AA Contract: 68-D9-0033

Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) WATER Lab Sample ID: BDN70B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: BDN70B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. dec. Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
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
100-10-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (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	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	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN71

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) WATER

Lab Sample ID: BDN71B

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: BDN71B

Level: (low/med) LOW

Date Received: 06/13/90

Moisture: not dec. dec.

Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	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	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
		10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN71

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) WATER

Lab Sample ID: BDN71B

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: BDN71B

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. dec.

Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF

Date Analyzed: 07/06/90

GPC Cleanup: (Y/N) N pH:

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
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
100-10-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (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	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	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN56BDL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN56BDL

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 23 dec.

Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.1

Dilution Factor: 20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	17000	U
111-44-4	bis(2-Chloroethyl)Ether	17000	U
95-57-8	2-Chlorophenol	17000	U
541-73-1	1,3-Dichlorobenzene	17000	U
106-46-7	1,4-Dichlorobenzene	17000	U
100-51-6	Benzyl Alcohol	17000	U
95-50-1	1,2-Dichlorobenzene	17000	U
95-48-7	2-Methylphenol	17000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	17000	U
106-44-5	4-Methylphenol	17000	U
621-64-7	N-Nitroso-Di-n-Propylamine	17000	U
67-72-1	Hexachloroethane	17000	U
98-95-3	Nitrobenzene	17000	U
78-59-1	Isophorone	17000	U
88-75-5	2-Nitrophenol	17000	U
105-67-9	2,4-Dimethylphenol	17000	U
65-85-0	Benzoic Acid	17000	U
111-91-1	bis(2-Chloroethoxy)Methane	83000	U
120-83-2	2,4-Dichlorophenol	17000	U
120-82-1	1,2,4-Trichlorobenzene	17000	U
91-20-3	Naphthalene	17000	U
106-47-8	4-Chloroaniline	4900	DJ
87-68-3	Hexachlorobutadiene	17000	U
59-50-7	4-Chloro-3-Methylphenol	17000	U
91-57-6	2-Methylnaphthalene	17000	U
77-47-4	Hexachlorocyclopentadiene	17000	U
88-06-2	2,4,6-Trichlorophenol	17000	U
95-95-4	2,4,5-Trichlorophenol	17000	U
91-58-7	2-Chloronaphthalene	83000	U
88-74-4	2-Nitroaniline	17000	U
131-11-3	Dimethyl Phthalate	83000	U
208-96-8	Acenaphthylene	17000	U
		5700	DJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56DL

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN56BDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN56BDL

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 23 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	83000	U
83-32-9	Acenaphthene	17000	U
51-28-5	2,4-Dinitrophenol	83000	U
100-02-7	4-Nitrophenol	83000	U
132-64-9	Dibenzofuran	2200	DJ
121-14-2	2,4-Dinitrotoluene	17000	U
606-20-2	2,6-Dinitrotoluene	17000	U
84-66-2	Diethylphthalate	17000	U
7005-72-3	4-Chlorophenyl-phenylether	17000	U
86-73-7	Fluorene	4400	DJ
100-10-6	4-Nitroaniline	83000	U
534-52-1	4,6-Dinitro-2-Methylphenol	83000	U
86-30-6	N-Nitrosodiphenylamine (1)	17000	U
101-55-3	4-Bromophenyl-phenylether	17000	U
118-74-1	Hexachlorobenzene	17000	U
87-86-5	Pentachlorophenol	83000	U
85-01-8	Phenanthrene	44000	D
120-12-7	Anthracene	17000	DJ
84-74-2	Di-n-Butylphthalate	17000	U
206-44-0	Fluoranthene	140000	D
129-00-0	Pyrene	140000	D
85-68-7	Butylbenzylphthalate	17000	U
91-94-1	3,3'-Dichlorobenzidine	34000	U
56-55-3	Benzo(a)Anthracene	74000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	17000	U
218-01-9	Chrysene	140000	D
117-84-0	Di-n-Octyl Phthalate	17000	U
205-99-2	Benzo(b)Fluoranthene	82000	D
207-08-9	Benzo(k)Fluoranthene	68000	D
50-32-8	Benzo(a)Pyrene	94000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	73000	D
53-70-3	Dibenz(a,h)Anthracene	26000	D
191-24-2	Benzo(g,h,i)Perylene	57000	D

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN61DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN61BDL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN61BDL

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 17 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 8.1

Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	19000	U
83-32-9	Acenaphthene	4000	U
51-28-5	2,4-Dinitrophenol	19000	U
100-02-7	4-Nitrophenol	19000	U
132-64-9	Dibenzofuran	740	DJ
121-14-2	2,4-Dinitrotoluene	4000	U
606-20-2	2,6-Dinitrotoluene	4000	U
84-66-2	Diethylphthalate	4000	U
7005-72-3	4-Chlorophenyl-phenylether	4000	U
86-73-7	Fluorene	4000	U
100-10-6	4-Nitroaniline	1400	DJ
534-52-1	4,6-Dinitro-2-Methylphenol	19000	U
86-30-6	N-Nitrosodiphenylamine (1)	19000	U
101-55-3	4-Bromophenyl-phenylether	4000	U
118-74-1	Hexachlorobenzene	4000	U
87-86-5	Pentachlorophenol	4000	U
85-01-8	Phenanthrene	19000	U
120-12-7	Anthracene	20000	D
84-74-2	Di-n-Butylphthalate	4800	D
206-44-0	Fluoranthene	4000	U
129-00-0	Pyrene	34000	D
85-68-7	Butylbenzylphthalate	32000	D
91-94-1	3,3'-Dichlorobenzidine	4000	U
56-55-3	Benzo(a)Anthracene	8000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	16000	D
218-01-9	Chrysene	590	DJ
117-84-0	Di-n-Octyl Phthalate	27000	D
205-99-2	Benzo(b)Fluoranthene	4000	U
207-08-9	Benzo(k)Fluoranthene	16000	D
50-32-8	Benzo(a)Pyrene	12000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	17000	D
53-70-3	Dibenz(a,h)Anthracene	14000	D
191-24-2	Benzo(g,h,i)Perylene	5800	D
		11000	D

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN64B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN64B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 9 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	730	U
111-44-4	bis(2-Chloroethyl)Ether	730	U
95-57-8	2-Chlorophenol	730	U
541-73-1	1,3-Dichlorobenzene	730	U
106-46-7	1,4-Dichlorobenzene	730	U
100-51-6	Benzyl Alcohol	730	U
95-50-1	1,2-Dichlorobenzene	730	U
95-48-7	2-Methylphenol	730	U
39638-32-9	bis(2-Chloroisopropyl)Ether	730	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-Di-n-Propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
65-85-0	Benzoic Acid	730	U
111-91-1	bis(2-Chloroethoxy)Methane	3500	U
120-83-2	2,4-Dichlorophenol	730	U
120-82-1	1,2,4-Trichlorobenzene	730	U
91-20-3	Naphthalene	730	U
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
59-50-7	4-Chloro-3-Methylphenol	730	U
91-57-6	2-Methylnaphthalene	730	U
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	3500	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	3500	U
131-11-3	Dimethyl Phthalate	730	U
208-96-8	Acenaphthylene	730	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: BDN64B

Sample wt/vol: 30.0 (g/mL) G Lab File ID: BDN64B

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 9 dec. Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3500	U
83-32-9	Acenaphthene	730	U
51-28-5	2,4-Dinitrophenol	3500	U
100-02-7	4-Nitrophenol	3500	U
132-64-9	Dibenzofuran	730	U
121-14-2	2,4-Dinitrotoluene	730	U
606-20-2	2,6-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
7005-72-3	4-Chlorophenyl-phenylether	730	U
86-73-7	Fluorene	730	U
100-10-6	4-Nitroaniline	3500	U
534-52-1	4,6-Dinitro-2-Methylphenol	3500	U
86-30-6	N-Nitrosodiphenylamine (1)	730	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
87-86-5	Pentachlorophenol	3500	U
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	86	J
84-74-2	Di-n-Butylphthalate	730	U
206-44-0	Fluoranthene	490	J
129-00-0	Pyrene	690	J
85-68-7	Butylbenzylphthalate	730	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)Anthracene	340	J
117-81-7	bis(2-Ethylhexyl)Phthalate	730	U
218-01-9	Chrysene	450	J
117-84-0	Di-n-Octyl Phthalate	730	U
205-99-2	Benzo(b)Fluoranthene	430	J
207-08-9	Benzo(k)Fluoranthene	730	U
50-32-8	Benzo(a)Pyrene	320	J
193-39-5	Indeno(1,2,3-cd)Pyrene	260	J
53-70-3	Dibenz(a,h)Anthracene	730	U
191-24-2	Benzo(g,h,i)Perylene	240	J

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN57DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN57BDLR

Sample wt/vol: 1.0 (g/mL) G

Lab File ID: BDN57BDLR

Level: (low/med) MED

Date Received: 06/13/90

% Moisture: not dec. 17 dec.

Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) N pH: 7.5

Dilution Factor: 60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1400000	U
111-44-4	bis(2-Chloroethyl)Ether	1400000	U
95-57-8	2-Chlorophenol	1400000	U
541-73-1	1,3-Dichlorobenzene	1400000	U
106-46-7	1,4-Dichlorobenzene	1400000	U
100-51-6	Benzyl Alcohol	1400000	U
95-50-1	1,2-Dichlorobenzene	1400000	U
95-48-7	2-Methylphenol	1400000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1400000	U
106-44-5	4-Methylphenol	1400000	U
621-64-7	N-Nitroso-Di-n-Propylamine	1400000	U
67-72-1	Hexachloroethane	1400000	U
98-95-3	Nitrobenzene	1400000	U
78-59-1	Isophorone	1400000	U
88-75-5	2-Nitrophenol	1400000	U
105-67-9	2,4-Dimethylphenol	1400000	U
65-85-0	Benzoic Acid	1400000	U
111-91-1	bis(2-Chloroethoxy)Methane	6900000	U
120-83-2	2,4-Dichlorophenol	1400000	U
120-82-1	1,2,4-Trichlorobenzene	1400000	U
91-20-3	Naphthalene	1400000	U
106-47-8	4-Chloroaniline	270000	DJ
87-68-3	Hexachlorobutadiene	1400000	U
59-50-7	4-Chloro-3-Methylphenol	1400000	U
91-57-6	2-Methylnaphthalene	1400000	U
77-47-4	Hexachlorocyclopentadiene	72000	DJ
88-06-2	2,4,6-Trichlorophenol	1400000	U
95-95-4	2,4,5-Trichlorophenol	1400000	U
91-58-7	2-Chloronaphthalene	6900000	U
88-74-4	2-Nitroaniline	1400000	U
131-11-3	Dimethyl Phthalate	6900000	U
208-96-8	Acenaphthylene	1400000	U
		65000	DJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDN57DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN57BDLR

Sample wt/vol: 1.0 (g/mL) G

Lab File ID: BDN57BDLR

Level: (low/med) MED

Date Received: 06/13/90

% Moisture: not dec. 17 dec.

Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) N pH: 7.5

Dilution Factor: 60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	6900000	U
83-32-9	Acenaphthene	9500	DJ
51-28-5	2,4-Dinitrophenol	6900000	U
100-02-7	4-Nitrophenol	6900000	U
132-64-9	Dibenzofuran	54000	DJ
121-14-2	2,4-Dinitrotoluene	1400000	U
606-20-2	2,6-Dinitrotoluene	1400000	U
84-66-2	Diethylphthalate	1400000	U
7005-72-3	4-Chlorophenyl-phenylether	1400000	U
86-73-7	Fluorene	62000	DJ
100-10-6	4-Nitroaniline	6900000	U
534-52-1	4,6-Dinitro-2-Methylphenol	6900000	U
86-30-6	N-Nitrosodiphenylamine (1)	1400000	U
101-55-3	4-Bromophenyl-phenylether	1400000	U
118-74-1	Hexachlorobenzene	1400000	U
87-86-5	Pentachlorophenol	6900000	U
85-01-8	Phenanthrene	220000	DJ
120-12-7	Anthracene	84000	DJ
84-74-2	Di-n-Butylphthalate	1400000	U
206-44-0	Fluoranthene	140000	DJ
129-00-0	Pyrene	140000	DJ
85-68-7	Butylbenzylphthalate	1400000	U
91-94-1	3,3'-Dichlorobenzidine	2900000	U
56-55-3	Benzo(a)Anthracene	54000	DJ
117-81-7	bis(2-Ethylhexyl)Phthalate	1400000	U
218-01-9	Chrysene	94000	DJ
117-84-0	Di-n-Octyl Phthalate	1400000	U
205-99-2	Benzo(b)Fluoranthene	36000	DJ
207-08-9	Benzo(k)Fluoranthene	43000	DJ
50-32-8	Benzo(a)Pyrene	49000	DJ
193-39-5	Indeno(1,2,3-cd)Pyrene	32000	DJ
53-70-3	Dibenz(a,h)Anthracene	15000	DJ
191-24-2	Benzo(g,h,i)Perylene	24000	DJ

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN60BDL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN60BDL

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 14 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.6

Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3800	U
111-44-4	bis(2-Chloroethyl)Ether	3800	U
95-57-8	2-Chlorophenol	3800	U
541-73-1	1,3-Dichlorobenzene	3800	U
106-46-7	1,4-Dichlorobenzene	3800	U
100-51-6	Benzyl Alcohol	3800	U
95-50-1	1,2-Dichlorobenzene	3800	U
95-48-7	2-Methylphenol	3800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3800	U
106-44-5	4-Methylphenol	3800	U
621-64-7	N-Nitroso-Di-n-Propylamine	3800	U
67-72-1	Hexachloroethane	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
65-85-0	Benzoic Acid	3800	U
111-91-1	bis(2-Chloroethoxy)Methane	19000	U
120-83-2	2,4-Dichlorophenol	3800	U
120-82-1	1,2,4-Trichlorobenzene	3800	U
91-20-3	Naphthalene	3800	U
106-47-8	4-Chloroaniline	1100	DJ
87-68-3	Hexachlorobutadiene	3800	U
59-50-7	4-Chloro-3-Methylphenol	3800	U
91-57-6	2-Methylnaphthalene	3800	U
77-47-4	Hexachlorocyclopentadiene	3800	U
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	3800	U
91-58-7	2-Chloronaphthalene	19000	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethyl Phthalate	19000	U
208-96-8	Acenaphthylene	3800	U
		2100	DJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.:

SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN60BDL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN60BDL

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 14 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 7.6

Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	19000	U
83-32-9	Acenaphthene	560	DJ
51-28-5	2,4-Dinitrophenol	19000	U
100-02-7	4-Nitrophenol	19000	U
132-64-9	Dibenzofuran	650	DJ
121-14-2	2,4-Dinitrotoluene	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
84-66-2	Diethylphthalate	3800	U
7005-72-3	4-Chlorophenyl-phenylether	3800	U
86-73-7	Fluorene	1100	DJ
100-10-6	4-Nitroaniline	19000	U
534-52-1	4,6-Dinitro-2-Methylphenol	19000	U
86-30-6	N-Nitrosodiphenylamine (1)	3800	U
101-55-3	4-Bromophenyl-phenylether	3800	U
118-74-1	Hexachlorobenzene	3800	U
87-86-5	Pentachlorophenol	19000	U
85-01-8	Phenanthrene	14000	D
120-12-7	Anthracene	3700	DJ
84-74-2	Di-n-Butylphthalate	3800	U
206-44-0	Fluoranthene	27000	D
129-00-0	Pyrene	26000	D
85-68-7	Butylbenzylphthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	7700	U
56-55-3	Benzo(a)Anthracene	14000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	3800	U
218-01-9	Chrysene	22000	D
117-84-0	Di-n-Octyl Phthalate	3800	U
205-99-2	Benzo(b)Fluoranthene	14000	D
207-08-9	Benzo(k)Fluoranthene	13000	D
50-32-8	Benzo(a)Pyrene	15000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	14000	D
53-70-3	Dibenz(a,h)Anthracene	5500	D
191-24-2	Benzo(g,h,i)Perylene	13000	D

(1) - Cannot be separated from Diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN61DL

Lab Name: ENCOTEC-AA

Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL

Lab Sample ID: BDN61BDL

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: BDN61BDL

Level: (low/med) LOW

Date Received: 06/13/90

% Moisture: not dec. 17 dec.

Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC

Date Analyzed: 07/09/90

GPC Cleanup: (Y/N) Y pH: 8.1

Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	4000	U
111-44-4	bis(2-Chloroethyl)Ether	4000	U
95-57-8	2-Chlorophenol	4000	U
541-73-1	1,3-Dichlorobenzene	4000	U
106-46-7	1,4-Dichlorobenzene	4000	U
100-51-6	Benzyl Alcohol	4000	U
95-50-1	1,2-Dichlorobenzene	4000	U
95-48-7	2-Methylphenol	4000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	4000	U
106-44-5	4-Methylphenol	4000	U
621-64-7	N-Nitroso-Di-n-Propylamine	4000	U
67-72-1	Hexachloroethane	4000	U
98-95-3	Nitrobenzene	4000	U
78-59-1	Isophorone	4000	U
88-75-5	2-Nitrophenol	4000	U
105-67-9	2,4-Dimethylphenol	4000	U
65-85-0	Benzoic Acid	4000	U
111-91-1	bis(2-Chloroethoxy)Methane	19000	U
120-83-2	2,4-Dichlorophenol	4000	U
120-82-1	1,2,4-Trichlorobenzene	4000	U
91-20-3	Naphthalene	4000	U
106-47-8	4-Chloroaniline	1400	DJ
87-68-3	Hexachlorobutadiene	4000	U
59-50-7	4-Chloro-3-Methylphenol	4000	U
91-57-6	2-Methylnaphthalene	4000	U
77-47-4	Hexachlorocyclopentadiene	4000	U
88-06-2	2,4,6-Trichlorophenol	4000	U
95-95-4	2,4,5-Trichlorophenol	4000	U
91-58-7	2-Chloronaphthalene	19000	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethyl Phthalate	19000	U
208-96-8	Acenaphthylene	4000	U
		3100	DJ

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN53

Lab Name: ENLOTEC-AA Contract: 68-D9-0033

Lab Code: ENLOT Case No.: 1422 SAS No.: SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536022

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 10 dec. Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) Y pH: 8.2 Dilution Factor: 2.00

CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG

CAS No.	COMPOUND	0	
319-84-6	alpha-BHC	38	U
319-85-7	beta-BHC	38	U
319-86-8	delta-BHC	38	U
58-89-9	Lindane	38	U
76-44-8	Heptachlor	38	U
309-00-2	Aldrin	38	U
1024-57-3	Heptachlor epoxide	38	U
959-98-8	Endosulfan I	38	U
60-57-1	Dieldrin	38	U
72-55-9	4,4'-DDE	76	U
72-20-8	Endrin	76	U
33213-65-9	Endosulfan II	76	U
72-54-8	4,4'-DDD	76	U
1031-07-8	Endosulfan sulfate	76	U
50-29-3	4,4'-DDT	76	U
72-43-5	Methoxychlor	76	U
53494-70-5	Endrin ketone	380	U
5103-71-9	alpha-Chlordane	76	U
5103-74-2	gamma-Chlordane	380	U
8001-35-2	Toxaphene	380	U
12674-11-2	Aroclor-1016	760	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	380	U
12672-29-6	Aroclor-1248	380	U
11097-69-1	Aroclor-1254	380	U
11096-82-5	Aroclor-1260	760	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN54

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536034

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 15 dec. __ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 4.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
319-84-6	alpha-BHC	75	U
319-85-7	beta-BHC	75	U
319-86-8	delta-BHC	75	U
58-89-9	Lindane	75	U
76-44-8	Heptachlor	75	U
309-00-2	Aldrin	75	U
1024-57-3	Heptachlor epoxide	75	U
959-98-8	Endosulfan I	75	U
60-57-1	Dieldrin	150	U
72-55-9	4,4'-DDE	150	U
72-20-8	Endrin	150	U
33213-65-9	Endosulfan II	150	U
72-54-8	4,4'-DDD	150	U
1031-07-8	Endosulfan sulfate	150	U
50-29-3	4,4'-DDT	150	U
72-43-5	Methoxychlor	750	U
53494-70-5	Endrin ketone	150	U
5103-71-9	alpha-Chlordane	750	U
5103-74-2	gamma-Chlordane	750	U
8001-35-2	Toxaphene	1500	U
12674-11-2	Aroclor-1016	750	U
11104-28-2	Aroclor-1221	750	U
11141-16-5	Aroclor-1232	750	U
53469-21-9	Aroclor-1242	750	U
12672-29-6	Aroclor-1248	750	U
11097-69-1	Aroclor-1254	1500	U
11096-82-5	Aroclor-1260	1500	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN55

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536044

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. __ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 4.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	74	U
319-85-7	beta-BHC	74	U
319-86-8	delta-BHC	74	U
58-89-9	Lindane	74	U
76-44-8	Heptachlor	74	U
309-00-2	Aldrin	74	U
1024-57-3	Heptachlor epoxide	74	U
959-98-8	Endosulfan I	74	U
60-57-1	Dieldrin	150	U
72-55-9	4,4'-DDE	150	U
72-20-8	Endrin	150	U
33213-65-9	Endosulfan II	150	U
72-54-8	4,4'-DDD	150	U
1031-07-8	Endosulfan sulfate	150	U
50-29-3	4,4'-DDT	150	U
72-43-5	Methoxychlor	740	U
53494-70-5	Endrin ketone	150	U
5103-71-9	alpha-Chlordane	740	U
5103-74-2	gamma-Chlordane	740	U
8001-35-2	Toxaphene	1500	U
12674-11-2	Aroclor-1016	740	U
11104-28-2	Aroclor-1221	740	U
11141-16-5	Aroclor-1232	740	U
53469-21-9	Aroclor-1242	740	U
12672-29-6	Aroclor-1248	740	U
11097-69-1	Aroclor-1254	1500	U
11096-82-5	Aroclor-1260	1500	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN56

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 5360510

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 23 dec. __ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	210	U
319-85-7	beta-BHC	210	U
319-86-8	delta-BHC	210	U
58-89-9	Lindane	210	U
76-44-8	Heptachlor	210	U
309-00-2	Aldrin	210	U
1024-57-3	Heptachlor epoxide	210	U
959-98-8	Endosulfan I	210	U
60-57-1	Dieldrin	210	U
72-55-9	4,4'-DDE	420	U
72-20-8	Endrin	420	U
33213-65-9	Endosulfan II	420	U
72-54-8	4,4'-DDD	420	U
1031-07-8	Endosulfan sulfate	420	U
50-29-3	4,4'-DDT	420	U
72-43-5	Methoxychlor	420	U
53494-70-5	Endrin ketone	2100	U
5103-71-9	alpha-Chlordane	420	U
5103-74-2	gamma-Chlordane	2100	U
8001-35-2	Toxaphene	2100	U
12674-11-2	Aroclor-1016	4200	U
11104-28-2	Aroclor-1221	2100	U
11141-16-5	Aroclor-1232	2100	U
53469-21-9	Aroclor-1242	2100	U
12672-29-6	Aroclor-1248	2100	U
11097-69-1	Aroclor-1254	2100	U
11096-82-5	Aroclor-1260	4200	U
		4200	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN57

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 5360610

Sample wt/vol: 1.0 (g/mL) G Lab File ID: _____

Level: (low/med) MED Date Received: 06/13/90

% Moisture: not dec. 17 dec. __ Date Extracted: 06/22/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) N pH: 7.5 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1400	U
319-85-7	beta-BHC	1400	U
319-86-8	delta-BHC	1400	U
58-89-9	Lindane	1400	U
76-44-8	Heptachlor	1400	U
309-00-2	Aldrin	1400	U
1024-57-3	Heptachlor epoxide	1400	U
959-98-8	Endosulfan I	1400	U
60-57-1	Dieldrin	1400	U
72-55-9	4,4'-DDE	2900	U
72-20-8	Endrin	2900	U
33213-65-9	Endosulfan II	2900	U
72-54-8	4,4'-DDD	2900	U
1031-07-8	Endosulfan sulfate	2900	U
50-29-3	4,4'-DDT	2900	U
72-43-5	Methoxychlor	2900	U
53494-70-5	Endrin ketone	14000	U
5103-71-9	alpha-Chlordane	2900	U
5103-74-2	gamma-Chlordane	14000	U
8001-35-2	Toxaphene	14000	U
12674-11-2	Aroclor-1016	29000	U
11104-28-2	Aroclor-1221	14000	U
11141-16-5	Aroclor-1232	14000	U
53469-21-9	Aroclor-1242	14000	U
12672-29-6	Aroclor-1248	14000	U
11097-69-1	Aroclor-1254	14000	U
11096-82-5	Aroclor-1260	29000	U
		29000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN58

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536075

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 16 dec. __ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/90

GPC Cleanup: (Y/N) Y pH: 8.0 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	95	U
319-85-7	beta-BHC	95	U
319-86-8	delta-BHC	95	U
58-89-9	Lindane	95	U
76-44-8	Heptachlor	95	U
309-00-2	Aldrin	95	U
1024-57-3	Heptachlor epoxide	95	U
959-98-8	Endosulfan I	95	U
60-57-1	Dieldrin	95	U
72-55-9	4,4'-DDE	190	U
72-20-8	Endrin	190	U
33213-65-9	Endosulfan II	190	U
72-54-8	4,4'-DDD	190	U
1031-07-8	Endosulfan sulfate	190	U
50-29-3	4,4'-DDT	190	U
72-43-5	Methoxychlor	190	U
53494-70-5	Endrin ketone	950	U
5103-71-9	alpha-Chlordane	190	U
5103-74-2	gamma-Chlordane	950	U
8001-35-2	Toxaphene	950	U
12674-11-2	Aroclor-1016	1900	U
11104-28-2	Aroclor-1221	950	U
11141-16-5	Aroclor-1232	950	U
53469-21-9	Aroclor-1242	950	U
12672-29-6	Aroclor-1248	950	U
11097-69-1	Aroclor-1254	950	U
11096-82-5	Aroclor-1260	1900	U
		1900	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN59

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536084

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. 10 dec. __ Date Extracted: 06/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 4.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
319-84-6	alpha-BHC	71	U
319-85-7	beta-BHC	71	U
319-86-8	delta-BHC	71	U
58-89-9	Lindane	71	U
76-44-8	Heptachlor	71	U
309-00-2	Aldrin	71	U
1024-57-3	Heptachlor epoxide	71	U
959-98-8	Endosulfan I	71	U
60-57-1	Dieldrin	71	U
72-55-9	4,4'-DDE	140	U
72-20-8	Endrin	140	U
33213-65-9	Endosulfan II	140	U
72-54-8	4,4'-DDD	140	U
1031-07-8	Endosulfan sulfate	140	U
50-29-3	4,4'-DDT	140	U
72-43-5	Methoxychlor	140	U
53494-70-5	Endrin ketone	710	U
5103-71-9	alpha-Chlordane	140	U
5103-74-2	gamma-Chlordane	710	U
8001-35-2	Toxaphene	710	U
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	710	U
11141-16-5	Aroclor-1232	710	U
53469-21-9	Aroclor-1242	710	U
12672-29-6	Aroclor-1248	710	U
11097-69-1	Aroclor-1254	710	U
11096-82-5	Aroclor-1260	1400	U
		1400	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60

ab Name: ENCOTEC-AA Contract: 68-D9-0033

ab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

trix: (soil/water) SOIL Lab Sample ID: 536095

mple wt/vol: 30.0 (g/mL) G Lab File ID: _____

evel: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. 14 dec. __ Date Extracted: 06/17/90

traction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/90

Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	93	U
319-85-7	beta-BHC	93	U
319-86-8	delta-BHC	93	U
58-89-9	Lindane	93	U
76-44-8	Heptachlor	93	U
309-00-2	Aldrin	93	U
1024-57-3	Heptachlor epoxide	93	U
959-98-8	Endosulfan I	93	U
60-57-1	Dieldrin	93	U
72-55-9	4,4'-DDE	190	U
72-20-8	Endrin	190	U
33213-65-9	Endosulfan II	190	U
72-54-8	4,4'-DDD	190	U
1031-07-8	Endosulfan sulfate	190	U
50-29-3	4,4'-DDT	190	U
72-43-5	Methoxychlor	230	
53494-70-5	Endrin ketone	930	U
5103-71-9	alpha-Chlordane	190	U
5103-74-2	gamma-Chlordane	930	U
8001-35-2	Toxaphene	930	U
12674-11-2	Aroclor-1016	1900	U
11104-28-2	Aroclor-1221	930	U
11141-16-5	Aroclor-1232	930	U
53469-21-9	Aroclor-1242	930	U
12672-29-6	Aroclor-1248	930	U
11097-69-1	Aroclor-1254	930	U
11096-82-5	Aroclor-1260	1900	U
		1900	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN60DL

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536098

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 8.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
319-84-6	alpha-BHC	150	U
319-85-7	beta-BHC	150	U
319-86-8	delta-BHC	150	U
58-89-9	Lindane	150	U
76-44-8	Heptachlor	150	U
309-00-2	Aldrin	150	U
1024-57-3	Heptachlor epoxide	150	U
959-98-8	Endosulfan I	150	U
60-57-1	Dieldrin	150	U
72-55-9	4,4'-DDE	300	U
72-20-8	Endrin	300	U
33213-65-9	Endosulfan II	300	U
72-54-8	4,4'-DDD	300	U
1031-07-8	Endosulfan sulfate	300	U
50-29-3	4,4'-DDT	300	U
72-43-5	Methoxychlor	240	DJ
53494-70-5	Endrin ketone	1500	U
5103-71-9	alpha-Chlordane	300	U
5103-74-2	gamma-Chlordane	1500	U
8001-35-2	Toxaphene	1500	U
12674-11-2	Aroclor-1016	3000	U
11104-28-2	Aroclor-1221	1500	U
11141-16-5	Aroclor-1232	1500	U
53469-21-9	Aroclor-1242	1500	U
12672-29-6	Aroclor-1248	1500	U
11097-69-1	Aroclor-1254	1500	U
11096-82-5	Aroclor-1260	3000	U
		3000	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN61

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536105

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 17 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) Y pH: 8.1 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	96	U
319-85-7	beta-BHC	96	U
319-86-8	delta-BHC	96	U
58-89-9	Lindane	96	U
76-44-8	Heptachlor	96	U
309-00-2	Aldrin	96	U
1024-57-3	Heptachlor epoxide	96	U
959-98-8	Endosulfan I	96	U
60-57-1	Dieldrin	96	U
72-55-9	4,4'-DDE	190	U
72-20-8	Endrin	190	U
33213-65-9	Endosulfan II	190	U
72-54-8	4,4'-DDD	190	U
1031-07-8	Endosulfan sulfate	190	U
50-29-3	4,4'-DDT	190	U
72-43-5	Methoxychlor	220	J
53494-70-5	Endrin ketone	960	U
5103-71-9	alpha-Chlordane	190	U
5103-74-2	gamma-Chlordane	960	U
8001-35-2	Toxaphene	960	U
12674-11-2	Aroclor-1016	1900	U
11104-28-2	Aroclor-1221	960	U
11141-16-5	Aroclor-1232	960	U
53469-21-9	Aroclor-1242	960	U
12672-29-6	Aroclor-1248	960	U
11097-69-1	Aroclor-1254	960	U
11096-82-5	Aroclor-1260	1900	U
		1900	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN62

ab Name: ENCOTEC-AA Contract: 68-D9-0033

ab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

trix: (soil/water) SOIL Lab Sample ID: 536114

mple wt/vol: 30.0 (g/mL) G Lab File ID: _____

evel: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. 18 dec. ___ Date Extracted: 06/17/90

xtraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

Cleanup: (Y/N) Y pH: 8.4 Dilution Factor: 4.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	78	U
319-85-7	beta-BHC	78	U
319-86-8	delta-BHC	78	U
58-89-9	Lindane	78	U
76-44-8	Heptachlor	78	U
309-00-2	Aldrin	78	U
1024-57-3	Heptachlor epoxide	78	U
959-98-8	Endosulfan I	78	U
60-57-1	Dieldrin	78	U
72-55-9	4,4'-DDE	160	U
72-20-8	Endrin	160	U
33213-65-9	Endosulfan II	160	U
72-54-8	4,4'-DDD	160	U
1031-07-8	Endosulfan sulfate	160	U
50-29-3	4,4'-DDT	160	U
72-43-5	Methoxychlor	130	J
53494-70-5	Endrin ketone	780	U
5103-71-9	alpha-Chlordane	160	U
5103-74-2	gamma-Chlordane	780	U
8001-35-2	Toxaphene	780	U
12674-11-2	Aroclor-1016	1600	U
11104-28-2	Aroclor-1221	780	U
11141-16-5	Aroclor-1232	780	U
53469-21-9	Aroclor-1242	780	U
12672-29-6	Aroclor-1248	780	U
11097-69-1	Aroclor-1254	780	U
11096-82-5	Aroclor-1260	1600	U
		1600	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN63

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536125

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 12 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 5.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	91	U
319-85-7	beta-BHC	91	U
319-86-8	delta-BHC	91	U
58-89-9	Lindane	91	U
76-44-8	Heptachlor	91	U
309-00-2	Aldrin	91	U
1024-57-3	Heptachlor epoxide	91	U
959-98-8	Endosulfan I	91	U
60-57-1	Dieldrin	91	U
72-55-9	4,4'-DDE	180	U
72-20-8	Endrin	180	U
33213-65-9	Endosulfan II	180	U
72-54-8	4,4'-DDD	180	U
1031-07-8	Endosulfan sulfate	180	U
50-29-3	4,4'-DDT	180	U
72-43-5	Methoxychlor	97	J
53494-70-5	Endrin ketone	910	U
5103-71-9	alpha-Chlordane	180	U
5103-74-2	gamma-Chlordane	910	U
8001-35-2	Toxaphene	910	U
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	910	U
11141-16-5	Aroclor-1232	910	U
53469-21-9	Aroclor-1242	910	U
12672-29-6	Aroclor-1248	910	U
11097-69-1	Aroclor-1254	910	U
11096-82-5	Aroclor-1260	1800	U
		1800	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN64

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 53613

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 9 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.6 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
319-84-6	alpha-BHC	18	U
319-85-7	beta-BHC	18	U
319-86-8	delta-BHC	18	U
58-89-9	Lindane	18	U
76-44-8	Heptachlor	18	U
309-00-2	Aldrin	18	U
1024-57-3	Heptachlor epoxide	18	U
959-98-8	Endosulfan I	18	U
60-57-1	Dieldrin	18	U
72-55-9	4,4'-DDE	35	U
72-20-8	Endrin	35	U
33213-65-9	Endosulfan II	35	U
72-54-8	4,4'-DDD	35	U
1031-07-8	Endosulfan sulfate	35	U
50-29-3	4,4'-DDT	35	U
72-43-5	Methoxychlor	35	U
53494-70-5	Endrin ketone	180	U
5103-71-9	alpha-Chlordane	35	U
5103-74-2	gamma-Chlordane	180	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	180	U
11141-16-5	Aroclor-1232	180	U
53469-21-9	Aroclor-1242	180	U
12672-29-6	Aroclor-1248	180	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	350	U

002761

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN65

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 53614

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. 14 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/12/90

GPC Cleanup: (Y/N) Y pH: 7.8 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/KG	Q
319-84-6	alpha-BHC	93	U
319-85-7	beta-BHC	93	U
319-86-8	delta-BHC	93	U
58-89-9	Lindane	93	U
76-44-8	Heptachlor	93	U
309-00-2	Aldrin	93	U
1024-57-3	Heptachlor epoxide	93	U
959-98-8	Endosulfan I	93	U
60-57-1	Dieldrin	190	U
72-55-9	4,4'-DDE	190	U
72-20-8	Endrin	190	U
33213-65-9	Endosulfan II	190	U
72-54-8	4,4'-DDD	190	U
1031-07-8	Endosulfan sulfate	190	U
50-29-3	4,4'-DDT	190	U
72-43-5	Methoxychlor	930	U
53494-70-5	Endrin ketone	190	U
5103-71-9	alpha-Chlordane	930	U
5103-74-2	gamma-Chlordane	930	U
8001-35-2	Toxaphene	1900	U
12674-11-2	Aroclor-1016	930	U
11104-28-2	Aroclor-1221	930	U
11141-16-5	Aroclor-1232	930	U
53469-21-9	Aroclor-1242	930	U
12672-29-6	Aroclor-1248	930	U
11097-69-1	Aroclor-1254	1900	U
11096-82-5	Aroclor-1260	1900	U

002768

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN66

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) SOIL Lab Sample ID: 536154

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

Moisture: not dec. 15 dec. __ Date Extracted: 06/17/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 07/10/90

GPC Cleanup: (Y/N) Y pH: 7.7 Dilution Factor: 4.00

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	75	U
319-85-7	beta-BHC	75	U
319-86-8	delta-BHC	75	U
58-89-9	Lindane	75	U
76-44-8	Heptachlor	75	U
309-00-2	Aldrin	75	U
1024-57-3	Heptachlor epoxide	75	U
959-98-8	Endosulfan I	75	U
60-57-1	Dieldrin	75	U
72-55-9	4,4'-DDE	150	U
72-20-8	Endrin	150	U
33213-65-9	Endosulfan II	150	U
72-54-8	4,4'-DDD	150	U
1031-07-8	Endosulfan sulfate	150	U
50-29-3	4,4'-DDT	150	U
72-43-5	Methoxychlor	100	J
53494-70-5	Endrin ketone	750	U
5103-71-9	alpha-Chlordane	150	U
5103-74-2	gamma-Chlordane	750	U
8001-35-2	Toxaphene	750	U
12674-11-2	Aroclor-1016	1500	U
11104-28-2	Aroclor-1221	750	U
11141-16-5	Aroclor-1232	750	U
53469-21-9	Aroclor-1242	750	U
12672-29-6	Aroclor-1248	750	U
11097-69-1	Aroclor-1254	750	U
11096-82-5	Aroclor-1260	1500	U
		1500	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN69

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) WATER Lab Sample ID: 53616

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	Lindane	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-[illegible]	Aroclor-1016	1.0	U
11104-28-[illegible]	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

002780

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN70

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN50

Matrix: (soil/water) WATER Lab Sample ID: 53617

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. ___ dec. ___ Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	Lindane	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U

002785

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDN71

Lab Name: ENCOTEC-AA Contract: 68-D9-0033

Lab Code: ENCOT Case No.: 14272 SAS No.: _____ SDG No.: BDN53

Matrix: (soil/water) WATER Lab Sample ID: 53618

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 06/13/90

% Moisture: not dec. __ dec. __ Date Extracted: 06/15/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/11/90

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.00

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L

CAS NO.	COMPOUND	Q
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	Lindane	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.050 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.10 U
53494-70-5	Endrin ketone	0.50 U
5103-71-9	alpha-Chlordane	0.10 U
5103-74-2	gamma-Chlordane	0.50 U
8001-35-2	Toxaphene	0.50 U
12674-11-2	Aroclor-1016	1.0 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	0.50 U
11096-82-5	Aroclor-1260	1.0 U
		1.0 U

002790

REFERENCE NO. 28

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9004-38	6/6/90	10:24

DISTRIBUTION:

— Elizabeth Coal Gas Site #2 file (COR.)
— R. Settino

BETWEEN:	OF:	PHONE:
Ken Knutzen	Union County Engineer's Office	(201) 789-3692

AND: Thomas Warner (NUS)

DISCUSSION:

Mr. Knutzen told me that part of the property we were interested in sampling was owned by the Church of St. Anthony. Their property starts 150' in from 4th Ave. along Centre St and High St. and continues for 190'. Their property is rectangular and encompasses the baseball diamond. The rest of the property is owned by Union County, and was donated to Parks and Recreation in 1953 by the City of Elizabeth. Bethal Corp. owned it and the St. Anthony property prior to that.

TAW 6/6/90

ACTION ITEMS:

NUS 067 REVISED 0685