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VERIFICATION STUDY ASSESSMENT OF POTENTIAL GROUNDWATER POLLUTION NAS
KEY WEST FL
3/1/1987
GERAGHTY AND MILLER INC

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VERIFICATION STUDY
ASSESSMENT OF POTENTIAL
GROUND-WATER POLLUTION AT
THE NAVAL AIR STATION
KEY WEST, FLORIDA

Prepared for

NAVAL FACILITIES
ENGINEERING COMMAND
SOUTHERN DIVISION
Charleston, South Carolina

MARCH 1987



Geraghty & Miller, Inc.

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VERIFICATION STUDY
ASSESSMENT OF POTENTIAL
GROUND-WATER POLLUTION AT
NAVAL AIR STATION - KEY WEST
KEY WEST, FLORIDA

Prepared for:

NAVAL FACILITIES ENGINEERING COMMAND
Southern Division
Charleston, South Carolina

March 1987

G&M Project No. TO290KW2

Prepared by:

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March 10, 1987

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Dear Mr. Chestnut:

Enclosed please find the final report entitled: "Verification Study: Assessment of Potential Ground-Water Pollution at Naval Air Station-Key West, Florida." This report summarizes the work performed during the Confirmation Study of the Naval Assessment and Control of Installation Pollutants Program. The recommendations presented herein will provide the basis for additional studies under the Characterization Phase of the Confirmation Study.

Geraghty & Miller, Inc., greatly appreciates the opportunity to assist the Navy with its ground-water resources related projects. We are available to discuss and support the findings and recommendations of this study with you and/or other concerned regulatory agencies at your convenience.

Respectfully submitted,

GERAGHTY & MILLER, INC.

Jean A. Hebert
Staff Scientist

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Enclosures
TO290KW2

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INTRODUCTION

As part of the Naval Assessment and Control of Installation Pollutants Program (NACIP) an Initial Assessment Study (IAS) was performed by Envirodyne Engineers, Inc., at the Naval Air Station-Key West (NAS) and associated Naval activities in Key West, Florida. The findings of the IAS were presented in a report dated May 1985 entitled: "Initial Assessment Study of Naval Air Station, Key West, Florida."

Based on the findings of that study, it was recommended that six sites (Site Nos. 1, 2, 3, 4, 5, and 8), shown in Figure 1, be evaluated further in order to assess potential long-term impacts to the environment and public health. In addition, three other sites (Site Nos. 7, 9, and 10), also shown in Figure 1, have been recommended for investigation based on information collected after completion of the IAS report. The Fleming Key North Landfill (Site No. 7) has been added due to comments raised by the Florida Department of Environmental Regulation (FDER) subsequent to a site visit by Geraghty & Miller, Inc., (G&M) and Navy personnel on October 15, 1985. Additionally, the Bulk Fuel Storage Area (Site No. 9) at Trumbo Point Annex and the Fire-Fighting Training Area on Boca Chica Key (Site No. 10) have been recommended for study by Navy personnel. Site No. 9 was selected as an outcome of a previous study conducted by G&M, the results of which were presented in a report entitled: "Subsurface Hydrocarbon Investigation at Trumbo Point Annex,

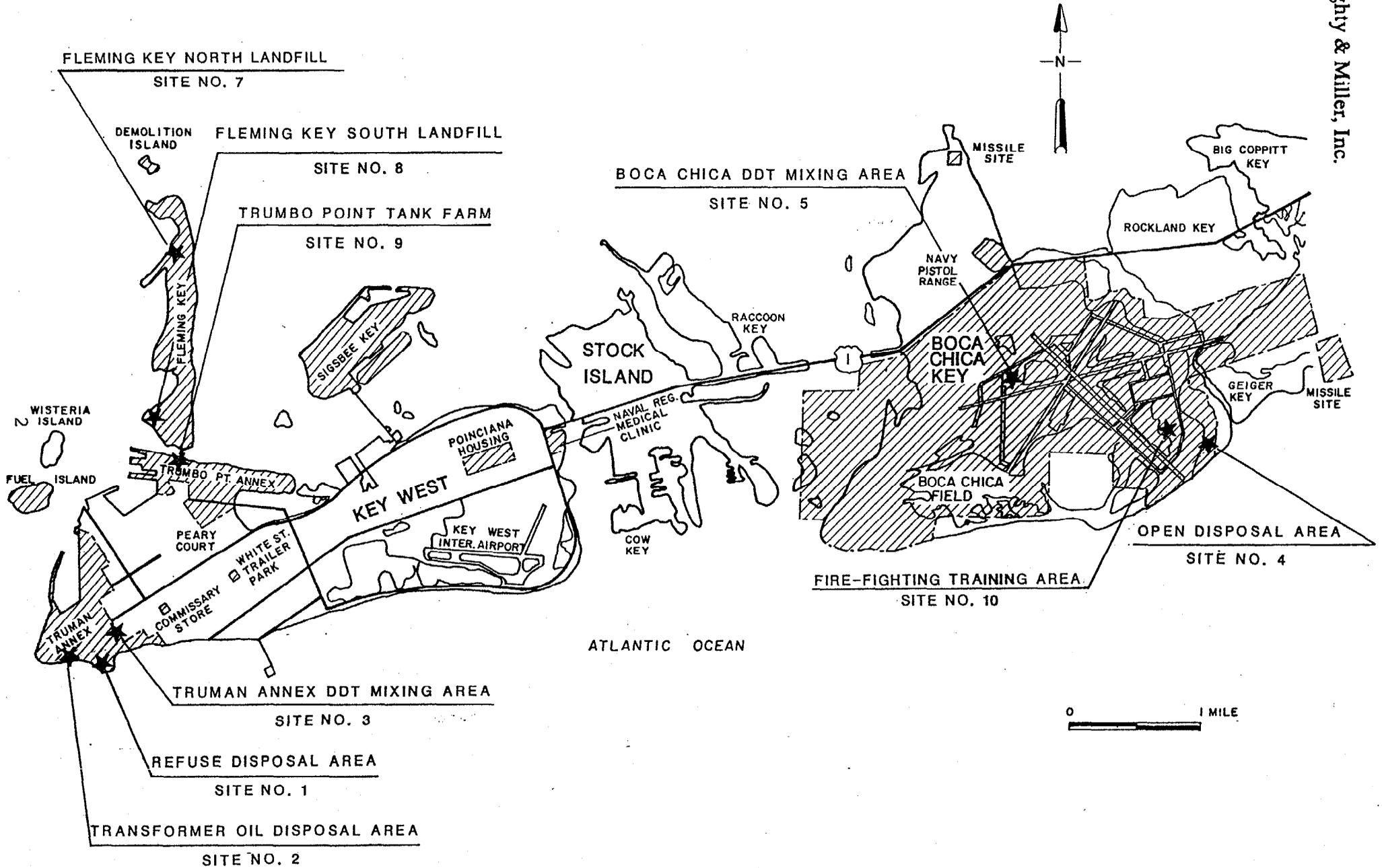


Figure 1. Locations of Naval Activities and Study Sites, Key West, Florida

NAS-Key West." Site No. 10 was selected during the site visit in October 1985 because hydrocarbon-stained soil was observed in this area.

This report discusses the verification phase of the NACIP Confirmation Study, performed by G&M during 1986, in which the presence or absence of shallow ground-water and/or soil contamination at the various sites were verified. Activities at the sites included soil boring/monitor-well installation, soil sampling, water-level measurements, and ground-water quality sampling. The findings of the verification phase are used to evaluate the potential impacts to the environment or public health. The report recommends which sites should not be investigated further and which sites need further study in the second phase of the Confirmation Study (characterization phase), during which additional site-specific investigations will be performed; proposed characterization phase work is outlined in the report summary.

APPROACH

In evaluating the sites, the overriding consideration was to identify the potential risks to human health and the environment. The factors taken into account in preparing recommendations for further study are outlined in Chapter 17-4.245(7)b, Florida Administrative Code (FAC). These factors include: (1) size of the contaminant plume, (2) toxicity and concentrations of the contaminants, (3) rate and direction of plume movement in relation to sources of water supply, (4) rate of attenuation of the plume, (5) current and projected use of adjacent ground waters and surface waters affected by the plume, and (6) costs of further study or clean-up in comparison to the benefits to the environment and the public.

Due to the proximity of NAS-Key West to the Atlantic Ocean (southside) and the Gulf of Mexico (northside), the quality of the ground water is saline in most places. Field conductivity measurements and laboratory analyses of water samples collected from most monitor wells at the study sites indicate that total dissolved solids (TDS) concentrations are greater than 10,000 milligrams per liter (mg/l) (see Appendix B). Analyses of samples collected from the remaining monitor wells show lower TDS values, probably reflecting the presence of localized or intermittent lenses of fresh ground water. Because these lenses are not used for a potable water supply, ground water at NAS-Key West is a candidate for designation

as Class G-III (non-potable water use) under Section 17-3.403 of the FAC. Class G-III ground waters are exempt from meeting FDER primary and secondary drinking-water standards. However, in accordance with Section 17-3.405 of the FAC, Class II ground waters must meet the minimum ground-water criteria outlined in Section 17-3.402. That section essentially states that the ground water shall be free from components of discharges in concentrations that are carcinogenic, mutagenic, toxic to human beings, or acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the ground water at the point of contact with surface waters. Because no numerical standards have been set in 17-3.402, the criteria for "Salt-Water Aquatic Life" have been used in this report in recommending future actions at individual sites.

Laboratory reports for volatile organic compounds (VOCs) indicate that methylene chloride was detected in samples from all wells at all sites. Additionally, this compound was reported in samples FK and TA collected from the water sources used for drilling on Fleming Key and Truman Annex, respectively, and also in the accompanying trip blank consisting of distilled water. The results of these analyses are given in Appendix B, Section 7. Because methylene chloride is a compound commonly used in laboratories, the data suggest that it was introduced into the water samples during the water-quality analytical procedures. The

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remaining compounds detected in the samples collected from the drilling-water sources are trihalomethanes, which are commonly found in potable water that has been chlorinated as a means of disinfection.

BACKGROUND

The IAS report (May 1985) described the general Naval activities at the NAS-Key West complexes, including the history of each facility; the topography, climate, geology, soil, and surface waters; and the waste types and disposal practices at the individual sites. Accordingly, the present study refers to this information only where it relates to recently collected site-specific information or where it is needed to clarify a particular action or recommendation at a site.

Project Setting

The NAS-Key West is located in Monroe County, approximately 150 miles southwest of Miami and 90 miles north of Havana, Cuba. The facility encompasses approximately 5,000 acres, concentrated around Key West and Boca Chica Key (Figure 1). The sites covered in this report are located in NAS-Key West on Boca Chica Key (3,250 acres), Truman Annex (121 acres), and Trumbo Point Annex (138.79 acres).

Naval activities in Key West began at Trumbo Point Annex with the commissioning of the Naval Air Base in December 1917. At that time, a seaplane training center and blimp facility were established and used primarily for anti-submarine patrol operations and a flight training center. At the end of World War I, the Air Station and Naval Base were decommissioned.

With the outbreak of World War II, the Naval Station was greatly expanded to serve as support to other Naval activities in the area. In Decemeber 1942, the Navy assumed jurisdiction of Boca Chica Field and in March 1945, the Naval Air Facilities at Key West and Boca Chica were combined into one activity under the designation of U.S. Naval Air Station, Key West.

The Naval Station at Key West was disestablished in 1974, resulting in the relocation of several units. At present, the mission of NAS Key West is "to maintain and operate facilities and provide services and material to support operations of aviation activities and units of the operating forces of the Navy and other activities and units as designated by the Chief of Naval Operations."

WORK PERFORMED

The work performed at the NAS in the verification phase of the Confirmation Study proceeded according to the Work Plan prepared by G&M in December 1985. Prior to beginning the field program at the various sites, data and literature concerning the study areas were reviewed. The field program, which began on June 16, 1986, consisted of soil boring/monitor-well installation, water-quality sampling, and soils sampling. A G&M hydrogeologist was present at all times to supervise the drilling program, collect sediment and water-quality samples, and collect water-level data.

Soil Boring/Monitor-Well Installation

A total of 42 soil borings and 25 monitor wells were installed at 6 of the 9 study sites. The soil borings were drilled with hollow-stem augers. Continuous soil samples were collected from each boring by the split-spoon method in order to define the surficial geology. Lithologic logs for the soil borings are given in Appendix A. The depths and screen settings of the wells, which were selected based on the site-specific geologic information, are given in Table 1; typical well-construction details are shown in Figures 2 and 3. Upon completion of soil sampling, well screens consisting of 2-inch-diameter PVC pipe with attached 2-inch-diameter (0.01-inch slot size) PVC screen were inserted into the boreholes. Graded silica sand then was placed in the annulus

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Table 1. Construction Details of Monitor Wells
Installed During the Verification Study,
June and July 1986

Monitor Well Number	Total Depth (ft bls)	Screened Interval (ft bls) ^{1/}	Measuring Point Elevation (ft msl) ^{2/}
<u>Site No. 1</u>			
KWM01	18	13-18	8.04
KWM02	18	13-18	7.55
KWM03	18	13-18	7.59
KWM04	18	13-18	8.87
<u>Site No. 4</u>			
KWM05	10	5-10	4.06
KWM06	10	5-10	4.26
KWM07	10	5-10	4.09
KWM08	12	7-12	4.40
<u>Site No. 7</u>			
KWM09	10	5-10	5.61
KWM10	12	7-12	7.18
KWM11	12	7-12	6.27
KWM12	9.5	4.5-9.5	3.69
<u>Site No. 8</u>			
KWM13	14	9-14	8.85
KWM14	12	7-12	11.51
KWM15	13	8-13	8.09
KWM16	12.5	7.5-12.5	7.98
KWM17	22	17-22	14.88
<u>Site No. 10</u>			
KWM18	11	0.5-11	2.82
KWM19	11	0.5-11	3.02
<u>Site No. 9</u>			
KWM20	15	1-15	6.99
KWM21	15	1-15	7.64
KWM22	15	1-15	7.72
KWM23	15	0.5-15	6.85
KWM24	15	0.5-15	6.63
KWM25	15	0.5-15	7.09

1/ ft bls = feet below land surface

2/ ft msl = feet above sea level; measuring point is the top of the PVC well casing.

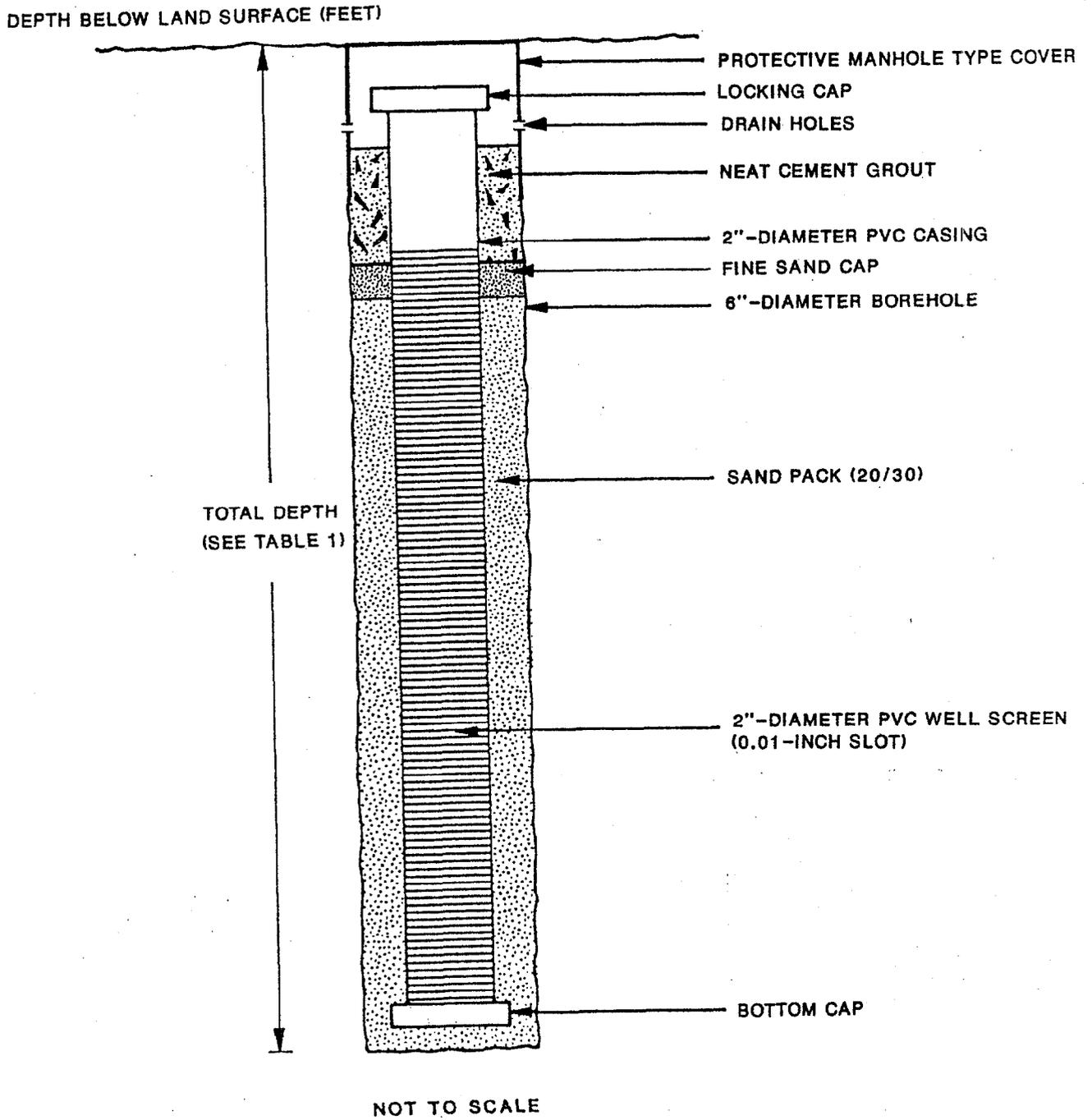


Figure 2. Schematic Diagram Showing Typical Below-Grade Monitor-Well Construction

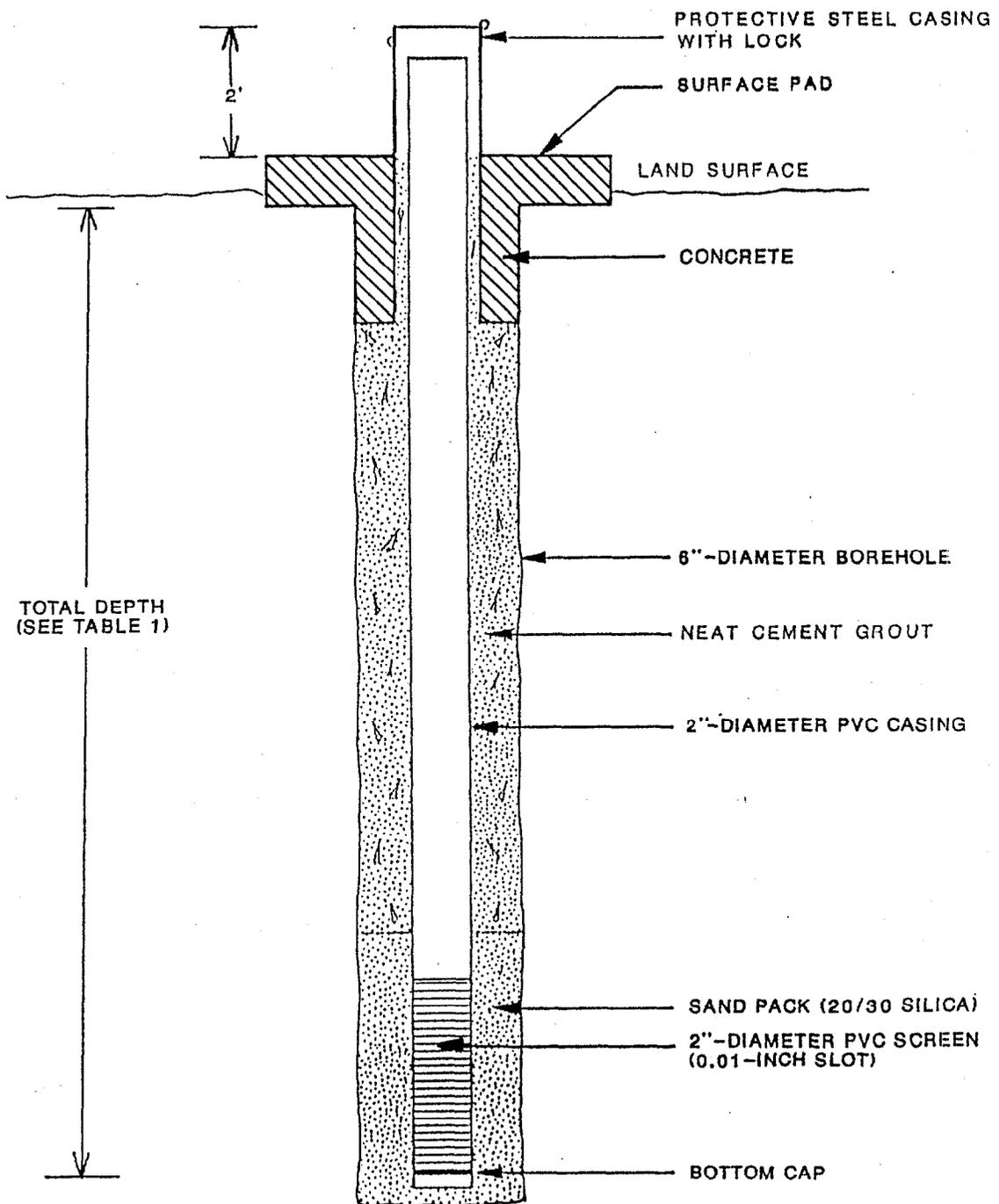


Figure 3. Schematic Diagram Showing Typical Above-Grade Monitor-Well Construction

around the casing from the bottom of the borehole to about 2 feet (ft) above the top of the well screen. The remaining annular space was filled with a neat cement grout to land surface to prevent infiltration of surface water. The monitor wells were completed with either a locking above-ground protective casing or a manhole type cover with locking cap. Each well was developed by pumping for one or two hours to produce a sand-free discharge.

Surveying

Upon completion of monitor-well installation, a site survey was conducted by a licensed (State of Florida No. 2749) land surveyor to establish a measuring point (elevation of top of PVC casing) at each well so that water-level elevations could be determined. Additionally, elevations were established at three measuring points, two at site 7 (Figure 9) and one at site 9 (Figure 11), on structures along the Gulf of Mexico in order to measure tidal fluctuations. The ground-water measurements from the monitor wells then were converted to elevations in feet above mean sea level (ft msl) using the National Geodetic Vertical Datum (1929). Table 2 lists the water-level elevations in the monitor wells and at the tidal measuring points.

Sampling and Analysis

Twenty-five ground-water samples, 54 soil samples, and 2 samples of the water used during well installation were

Table 2. Water-Level Measurements Collected During July and August 1986
(Given in feet above or below mean sea level)

Well	Measuring Point Elevation	Water-Level Elevation			
		7-8-86	7-9-86	7-10-86	8-4-86
<u>Truman Annex</u>					
KWM01	8.04	-- ^{1/}	-0.45 ^{2/}	0.86	-0.16
KWM02	7.55	--	-0.61	0.86	-0.66
KWM03	7.59	--	-0.63	0.67	-0.62
KWM04	8.87	--	-0.45	0.69	-0.38
<u>Trumbo Point</u>					
KWM20	6.99	--	1.04	1.30	0.98
KWM21	7.64	--	--	1.22	0.94
KWM22 ^{3/}	7.72	--	2.06	1.54	1.54
KWM23 ^{3/}	6.85	--	1.55	1.47	--
KWM24	6.63	--	--	1.30	0.93
KWM25	7.09	--	1.43	1.35	0.87
MW1 ^{3/}	5.82	--	1.97	1.90	1.74
MW2	6.11	--	-1.56	1.18	--
MW4 ^{3/}	7.59	--	--	3.23	2.80
MW5	6.79	--	2.70	2.55	2.05
MW7 ^{3/}	7.33	--	--	1.72	1.12
MW9	6.99	--	1.60	1.43	1.10
MW10	6.75	--	2.50	2.42	1.75
"A"	6.06	--	--	1.16	1.26
<u>Fleming Key</u>					
KWM09	5.61	--	--	0.34	0.46
KWM10	7.18	0.70	--	0.68	0.65
KWM11	6.27	0.81	--	0.74	0.67
KWM12	3.69	0.06	--	0.79	0.29
KWM13	8.85	--	0.70	0.65	0.45
KWM14	7.11	0.36	--	0.42	0.36
KWM15	8.09	0.45	--	0.53	0.39
KWM16	7.98	--	0.35	0.80	0.47
KWM17	14.88	--	0.42	0.90	0.39
"B"	3.22	--	--	1.02	0.67
"C"	4.44	--	--	1.04	-0.16
<u>Boca Chica</u>					
KWM05	4.06	1.26	--	0.68	0.92
KWM06	4.26	1.06	--	0.68	0.85
KWM07	4.09	1.09	--	0.56	0.74
KWM08	4.40	1.12	--	0.58	0.75
KWM18	2.82	1.28	--	0.76	0.72
KWM19	3.02	0.96	--	0.10	0.52

1/

A blank means no measurement taken.

2/

Negative sign, e.g. -0.16, means feet below msl.

3/

Water-level elevations have been adjusted to account for floating hydrocarbons in the well.

Note: Well designations beginning with "MW" were installed as part of another study. Letter designations "A, B, C" indicate tidal measuring points.

collected by G&M personnel and analyzed at a laboratory approved by FDER and the Navy. To collect the ground-water samples, approximately three well volumes of water were removed initially from each well with a peristaltic pump; water-quality samples then were collected with a Teflon bailer. Measurements of temperature, pH, and specific conductance made in the field at the time of water-quality sampling are summarized in Table 1 of Appendix B. The sample containers were supplied by the laboratory; all containers requiring preservatives were prepared in the field. After sample containers were filled with water, they were stored on ice prior to delivery via air freight to the laboratory. Laboratory results of water-quality analyses are presented in Appendix B.

Soil samples were collected by the hollow-stem auger method at Site Nos. 2, 3, and 5. Each of the three sites was divided into six plots and a total of three sampling points were selected in each plot from which separate samples were collected at depths of 0-1, 1-2, and 2-3 ft below land surface. A composite sample was prepared by gathering the soil from each particular depth at the three sampling points in the plot, mixing it together, and placing part of the mixture in the sample container. The approximate locations of these sampling points are shown in the site maps. The samples were delivered via air freight to the laboratory

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within 48 hours from the time of sampling. Laboratory results for the soil analyses are presented in Appendix C.

HYDROGEOLOGIC SYSTEM

Topography and Drainage

The topography at the NAS-Key West is generally flat, with land surface elevations ranging from about 0 to 15 ft msl. Average rainfall in Key West is approximately 40 inches per year, 70% of which is estimated to be lost to the atmosphere by evapotranspiration. The remaining rainfall either percolates rapidly into the permeable surficial sediments or is conveyed quickly to the sea via the storm drainage system.

Geology

The uppermost geologic formation in the lower Florida Keys is the Miami Oolite. This unit, found at each study site at NAS-Key West, is approximately 20 ft thick and is composed of sand-sized rounded accretionary grains mixed with carbonate sands and shelly material (White, 1970).

The geologic units underlying the Miami Oolite, in order of increasing depth, are: the Key Largo limestone (composed of cemented coral reef rubble and shelly material to a depth of roughly 250 ft), Tamiami Formation (a limestone containing fine sand, clayey sand, and gray-green clay to a depth of 900 ft), Hawthorn Formation (consisting of blue-green clay and marl with varying amounts of quartz sand and gravel to a depth of 1,100 ft), and the Tampa Formation (a sandy

limestone to a depth of 1,200 ft).

Hydrology

Only thin lenses of fresh ground water may be found floating on denser underlying salt water in the larger islands of the Florida Keys. Such fresh-water lenses are generally absent on the smaller islands. During the rainy season, the fresh-water lenses may increase slightly in thickness, but during the dry season, they tend to disappear rapidly through seepage to the sea and by evapotranspiration (Parker, 1955).

Only a few wells in the Key West area yield relatively fresh water, and all water needed for potable supplies is obtained from either rainwater catchments (cisterns) or the Florida Keys Aqueduct Authority via a 130-mile-long pipeline from the mainland (IAS, 1985). A 3-mgd (million gallons per day) desalination plant is located on Stock Island to provide water for emergencies.

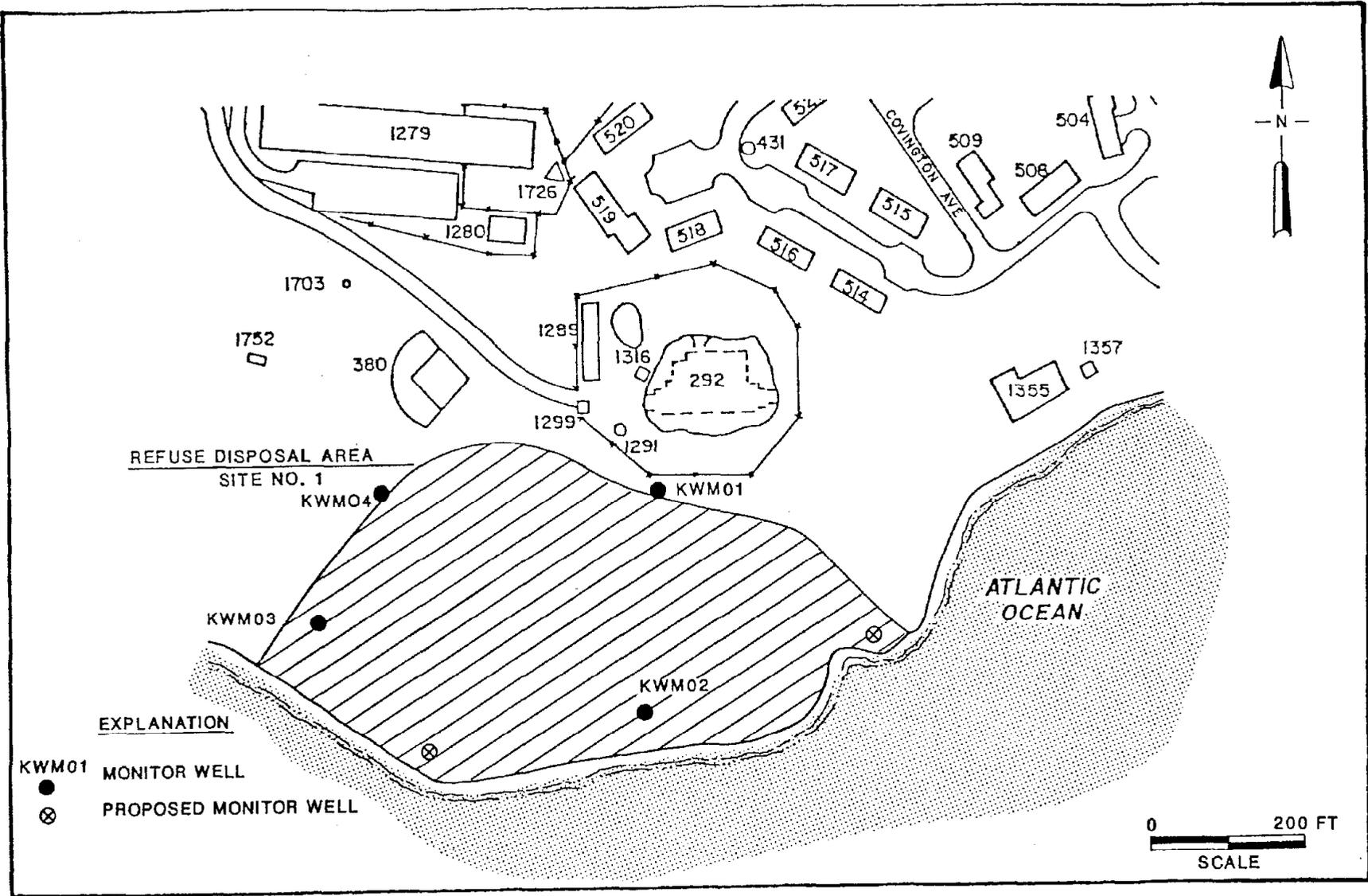
REFUSE DISPOSAL AREA (SITE NO. 1)

General Description

The Refuse Disposal Area, shown in Figure 4, is located along the south shoreline of Truman Annex on Key West in an area where various kinds of Navy radio antennae are being installed. From 1952 until the mid-1960's, the area was used for general refuse disposal and open burning. Combustible wastes, such as telephone poles, tree clippings, and paper, were taken to this site and burned, and waste liquids, including waste oil and hydraulic fluids, were used to help ignite the wastes. The refuse taken to the site could have included shop wastes such as paints, thinners, and solvents. Because the burning operation was not a controlled process, all the wastes may not have been completely destroyed.

Findings

Four shallow monitor wells (KWM01, KWM02, KWM03, and KWM04) were installed to a depth of 18 ft at the locations shown in Figure 4; measurements of the water levels in the wells are given in Table 2. Ground-water samples were collected from these wells and analyzed for pH, specific conductivity, TDS, and the EPA priority pollutants, which include VOCs, acid and base-neutral extractable compounds, pesticides, PCBs (polychlorinated biphenyls), and metals; the analytical results are given in Appendix B. The analyses of samples from wells KWM01 and KWM03 did not show the presence



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Figure 4. Site Plan Showing Installed and Proposed Monitor-Well Locations at the Refuse Disposal Area (Site No. 1)

of any of these constituents, except metals, in concentrations above the detection limits. The analyses of samples from KWM02 indicate that several base-neutral extractable compounds were detected, including: phenanthrene (14 ppb), anthracene (1.1 ppb), fluoranthene (2.4 ppb), acenaphthene (7.4 ppb), and fluorene (7.5 ppb). Also, several VOCs were detected, including benzene (1.6 ppb), toluene (4.3 ppb), ethylbenzene (1.6 ppb), and total xylenes (7.2 ppb). The analyses for KWM04 show concentrations of two VOCs above detection limits: trans-1,2-dichloroethylene (18 ppb) and trichloroethylene (14 ppb). No standards have been promulgated for several of these compounds. For the remaining compounds, the reported concentrations are within the standards given for "Saltwater Aquatic Life" (Federal Register, November 28, 1980, presented in Appendix D).

Analyses of priority pollutant metals indicate that three (copper, mercury, and arsenic) were present at all wells in concentrations above the laboratory detection limits. Additionally, all wells were reported to have levels of copper and mercury above the "Saltwater Aquatic Life" standards (Appendix D). High specific conductance readings and high TDS levels (>10,000 mg/l) were reported for all wells (Appendix B, Table 1 and Section 1).

Recommendations

To better delineate the extent of contaminated ground water, it is recommended that two additional monitor wells be installed at the locations shown in Figure 4. A one-year sampling program (quarterly) should be implemented during which ground water from each well (existing and proposed) would be analyzed for VOCs (EPA Method 624), base-neutral extractables (EPA Method 625), EPA priority pollutant metals, and TDS. Water-level measurements and field parameter measurements (temperature, pH, and specific conductance) should be made at the time of sampling. This information will constitute a data base for preparing monitoring plans, risk assessments, feasibility studies, or remedial action plans.

TRANSFORMER OIL DISPOSAL AREA (SITE NO. 2)

General Description

The Transformer Oil Disposal Area (Figure 5) is located at the gravel parking area adjacent to the Defense Property Disposal Office (DPDO), Building 795. From the mid-1950's until approximately 1970, off-line transformers were sent there for disposal. Reportedly, the transformers were punctured near the bottom to allow the dielectric fluid to drain. The oil was then spread over the gravel parking area to control dust and weeds.

Findings

This site was divided into six plots (Figure 5). Eighteen composite soil samples (three from each plot) were collected in the manner described in the Sampling and Analysis section of this report. The laboratory analyses indicate that all soil samples collected from the upper 1 ft of the parking lot contained concentrations of various types of PCBs ranging from 0.3 to 4.2 parts per million (ppm). Additionally, one composite soil sample from the 2-ft to 3-ft depth interval at plot 5 contained 0.07 ppm of PCBs (see Table 3).

Recommendations

Based on the low concentrations of PCBs in the soil samples, the site does not appear to be a threat to human

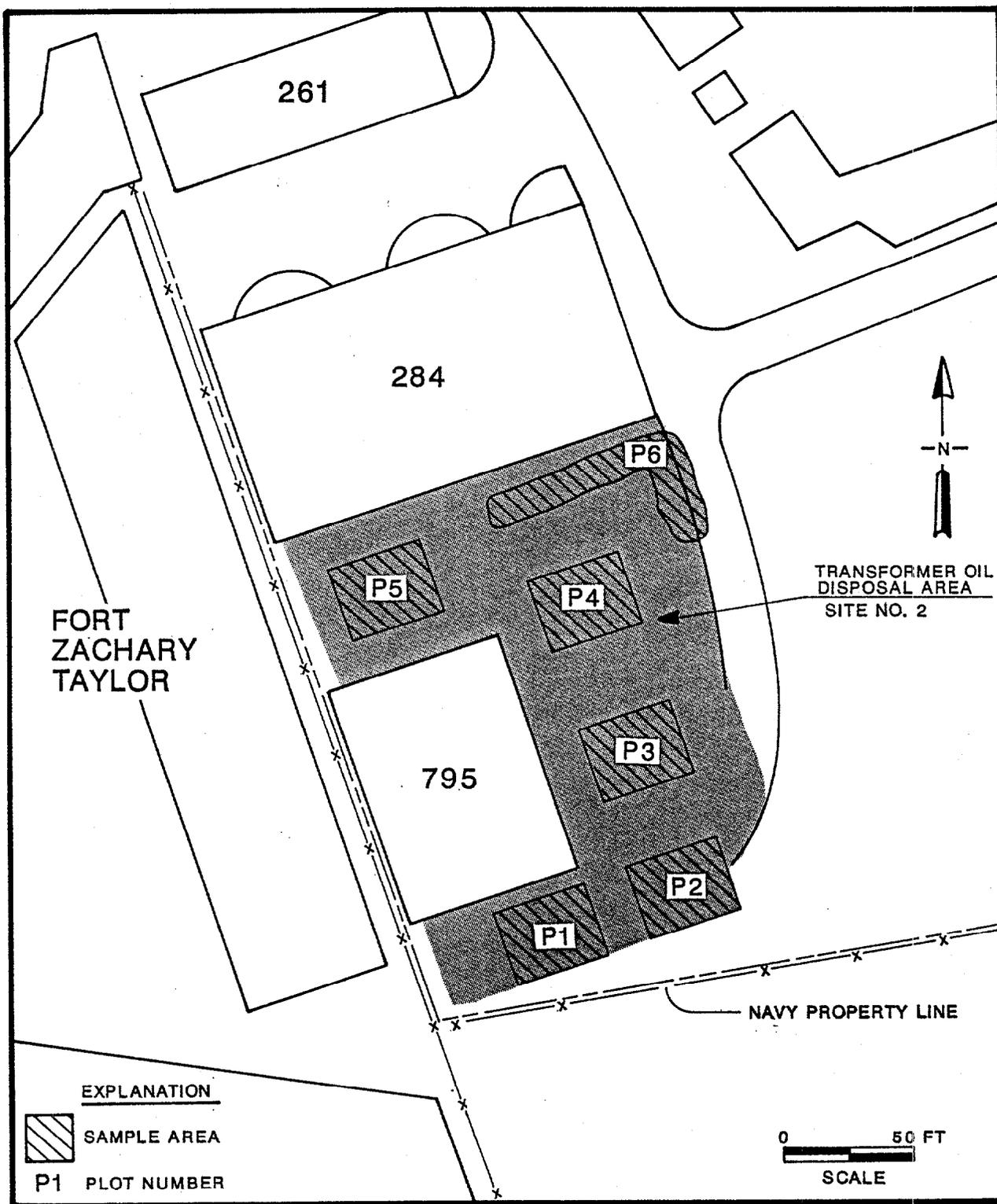


Figure 5. Site Plan Showing Soil Sampling Plots at the Transformer Oil Disposal Area (Site No. 2)

Table 3. Summary of Concentrations of Total PCBs in Composite Soil Samples from Site 2

(Concentrations in ppm)

Depth (ft)	Plots					
	P-1	P-2	P-3	P-4	P-5	P-6
0-1	1.8	4.2	3.0	0.308	2.00	1.5
1-2	BDL ^{1/}	BDL	BDL	BDL	BDL	BDL
2-3	BDL	BDL	BDL	BDL	0.07	BDL

1/ BDL means below the laboratory detection limit.

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health or the environment and no additional work is
recommended.

TRUMAN ANNEX DDT MIXING AREA (SITE NO. 3)

General Description

The Truman Annex DDT Mixing Area (Figure 6) is located on a non-posted vacant lot at the location of demolished Building No. 265. This building was used as a DDT mixing area from the 1940's to the early 1970's. Powdered DDT concentrate was mixed with water in 55-gallon drums and stored there until it was needed for spraying from a small tank truck. This site was not intended for disposal, but due to unintentional spillage during mixing and filling operations, some DDT was lost.

Findings

This site was divided into six plots (Figure 6). Eighteen composite soil samples (three from each plot) were collected in the manner described in the Sampling and Analysis section of this report. The laboratory analyses presented in Table 4 indicate that pesticides are present, in varying degrees of concentration, in all of the soil samples, generally decreasing with depth.

Recommendations

Based on the observed concentrations of pesticides in the soil samples, it is recommended that the horizontal extent of soil contamination be defined further. The additional soil sampling will be performed in the vicinity of

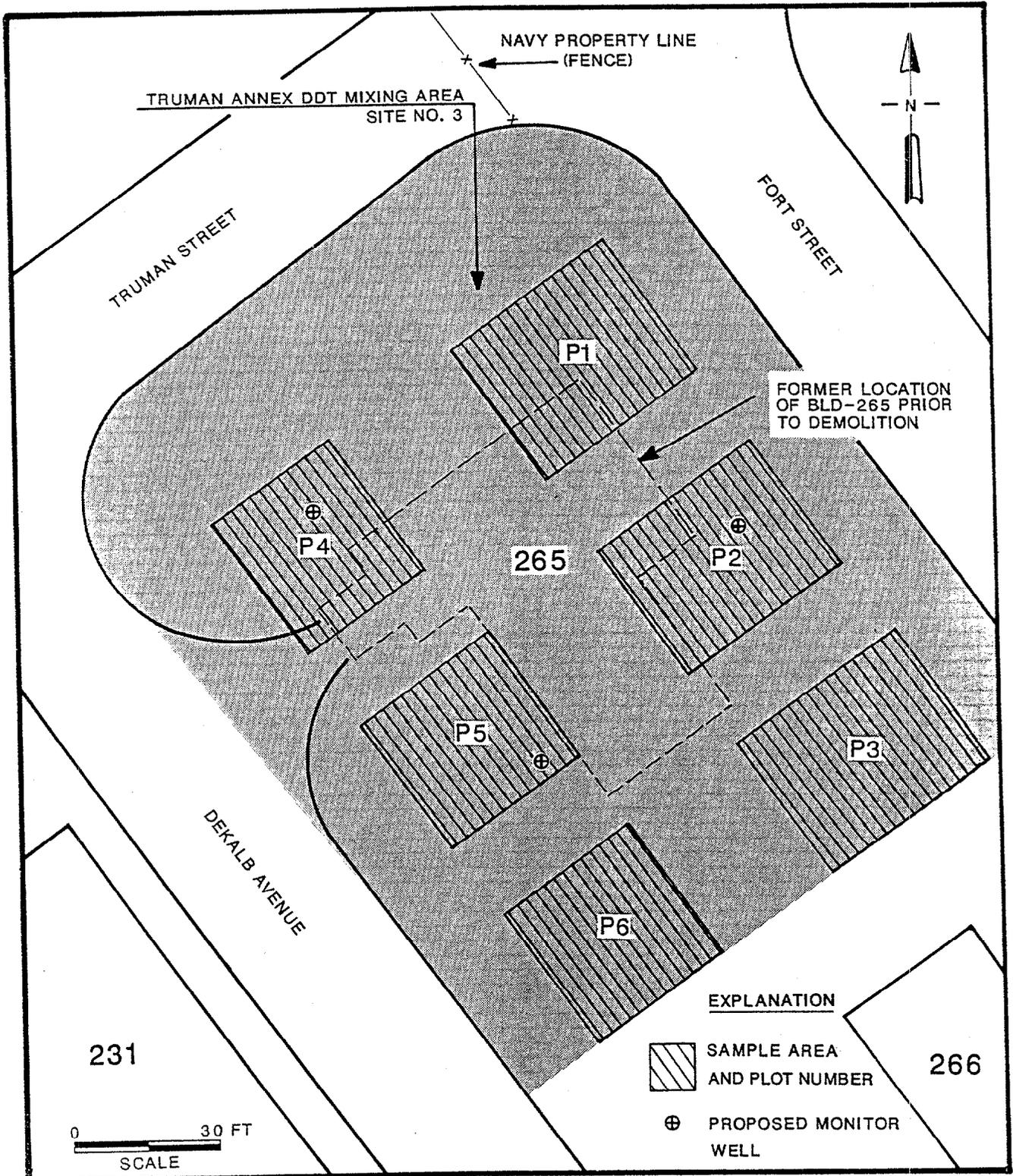


Figure 6. Site Plan Showing Soil Sampling Plots and Proposed Monitor Wells at the Truman Annex DDT Mixing Area (Site No. 3)

Table 4. Summary of DDT^{1/} Concentrations in Soil Samples from Site 3

(Concentrations in ppm)

Depth (ft)	Plots					
	P-1	P-2	P-3	P-4	P-5	P-6
0-1	0.70	54.200	6.6000	27.100	8.3600	0.642
1-2	1.03	0.850	0.0885	1.380	0.0138	0.014
2-3	0.95	0.006	0.0128	0.674	0.0299	0.020

1/ DDT and its daughter products DDE & DDD

Summary of Alpha-, Beta-, Gamma- and Delta- BHC Concentrations in Soil Samples from Site 3

(Concentrations in ppm)

Depth (ft)	Plots					
	P-1	P-2	P-3	P-4	P-5	P-6
0-1	0.101 ^{1/}	2.6000 ^{4/}	0.2000 ^{5/}	0.670	0.140	0.0075
1-2	0.096 ^{2/}	0.0091	0.0049	0.220	0.029	BDL
2-3	0.083 ^{3/}	0.0442	BDL ^{6/}	0.026	0.0065	BDL

- 1/ Chlordane (0.410 ppm) and Dieldrin (0.870 ppm) were also detected in this sample.
 2/ Chlordane (0.510 ppm) and Dieldrin (1.40 ppm) were also detected in this sample.
 3/ Chlordane (0.530 ppm) and Dieldrin (1.20 ppm) were also detected in this sample.
 4/ Chlordane (4.50 ppm) was also detected in this sample.
 5/ Chlordane (0.920) was also detected in this sample.
 6/ BDL means below laboratory detection limit.

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subplots 2, 4, and 5 as these areas exhibited the highest concentration of pesticides. Soils from only the uppermost foot will be collected and analyzed for pesticides by EPA method 608. It has been shown in this study that the pesticide concentration decreases rapidly with depth in the soil column. Also, three shallow monitor wells will be installed to determine the presence of pesticides in the uppermost saturated zone. The water-quality samples will be analyzed for pesticides by EPA method 608.

OPEN DISPOSAL AREA (SITE NO. 4)

General Description

The Open Disposal Area is located in the southeastern part of Boca Chica Key, between the perimeter road and Geiger Creek (Figure 7). The site was operated as an open disposal and burning area from 1942, when the NAS first was established on Boca Chica, until the area was closed in the mid-1960's. The site received general refuse and waste associated with the operation and maintenance of aircraft operated by the squadrons and Aircraft Intermediate Maintenance Department. These wastes might have included waste oils, hydraulic fluids, paint thinners, and solvents. About 2,600 tons of waste from the NAS were disposed of on the ground and were burned at this site annually. Because the burning operation was not a controlled process, the wastes may not have been completely destroyed. Three abandoned above-ground tanks are located in the northwest area of the site. The sides, foundations, and ground around the tanks are covered with an unknown black asphalt-like substance.

Findings

Four shallow monitor wells (KWM05, KWM06, KWM07, and KWM-08) were installed to depths of 10 to 12 ft at locations shown in Figure 7. Ground-water elevations in these wells (Table 2) ranged from 0.56 to 0.92 ft msl with a general southeasterly direction of flow toward the Atlantic Ocean.

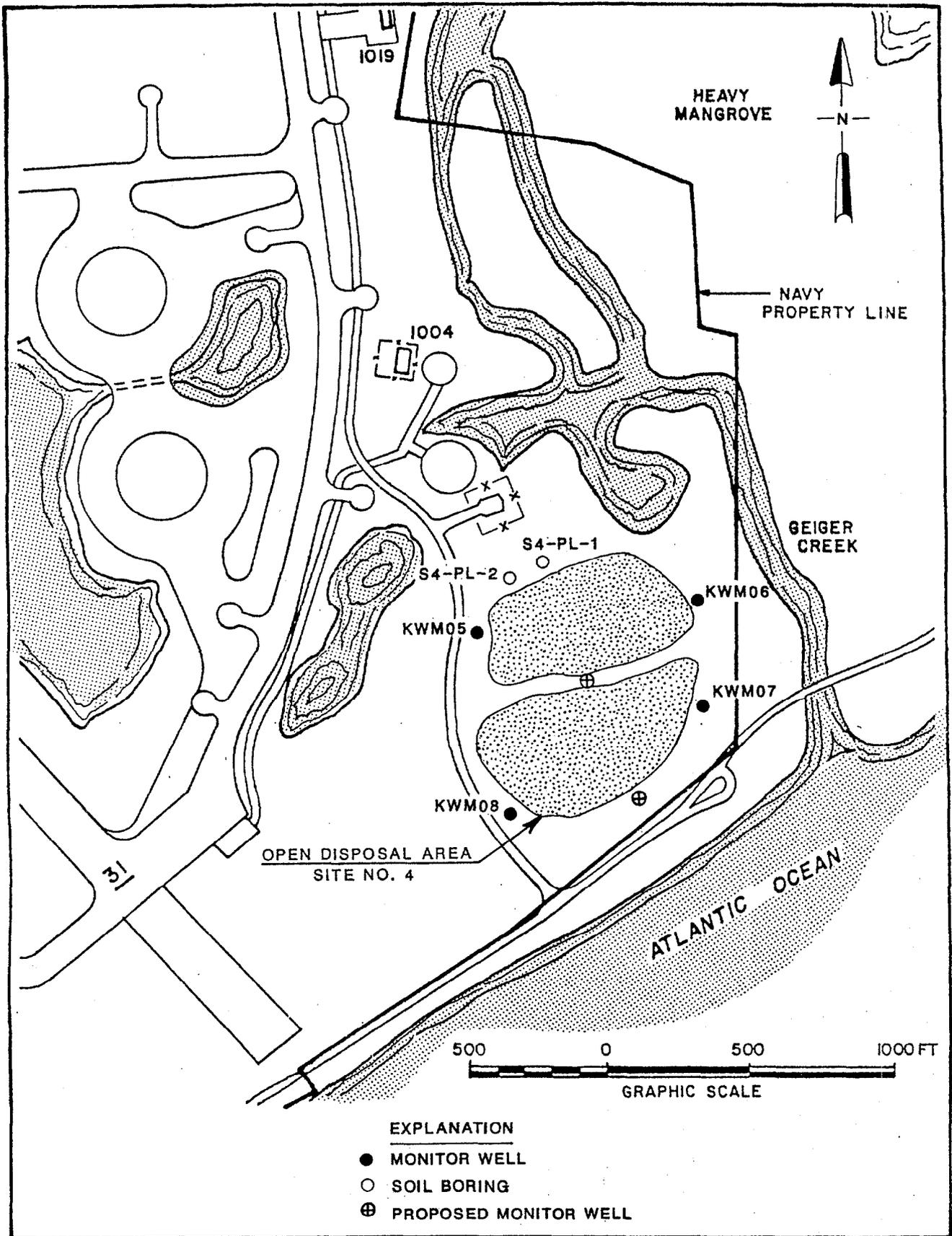


Figure 7. Site Plan Showing Installed and Proposed Monitor-Well Locations at the Open Disposal Area (Site No. 4)

The water levels probably are influenced tidally due to the proximity of the site to the ocean.

Water-quality samples were collected from each well and analyzed for pH, specific conductivity, TDS, and EPA priority pollutants (as described earlier). Results of these analyses, given in Appendix B, Section 2, indicate that the TDS ranged from 24,000 to 42,000 ppm and that no acid extractables, pesticides, or PCBs were detected. Several VOCs were detected in concentrations at or below 16 parts per billion (ppb) and total xylenes were detected at 35 ppb. Several base-neutral extractable compounds also were detected in concentrations of less than 10 ppb, except for naphthalene (34 ppb). Of the metals analyzed, concentrations of mercury (0.01 ppm), copper (0.06 ppm), and arsenic (0.065 ppm) were above the detection limits.

Two soil samples, collected adjacent to the abandoned tanks at the locations given in Figure 7, were analyzed for RCRA metals by Extraction Procedure (EP) Toxicity (Appendix C, Section 3). Concentrations of these metals all were below the detection limits.

Recommendations

Based on these findings, it is recommended that two additional monitor wells be installed at the locations shown in Figure 7. A one-year sampling program (quarterly) should be implemented during which ground water from each well

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(existing and proposed) would be analyzed for VOCs (EPA Method 624), base-neutral extractables (EPA Method 625), EPA priority pollutant metals, and TDS. Water-level measurements should be collected at the time of sampling along with field parameter measurements (temperature, pH, and specific conductance). This information will constitute a data base for preparing monitoring plans, risks assessments, feasibility studies, or remedial action plans.

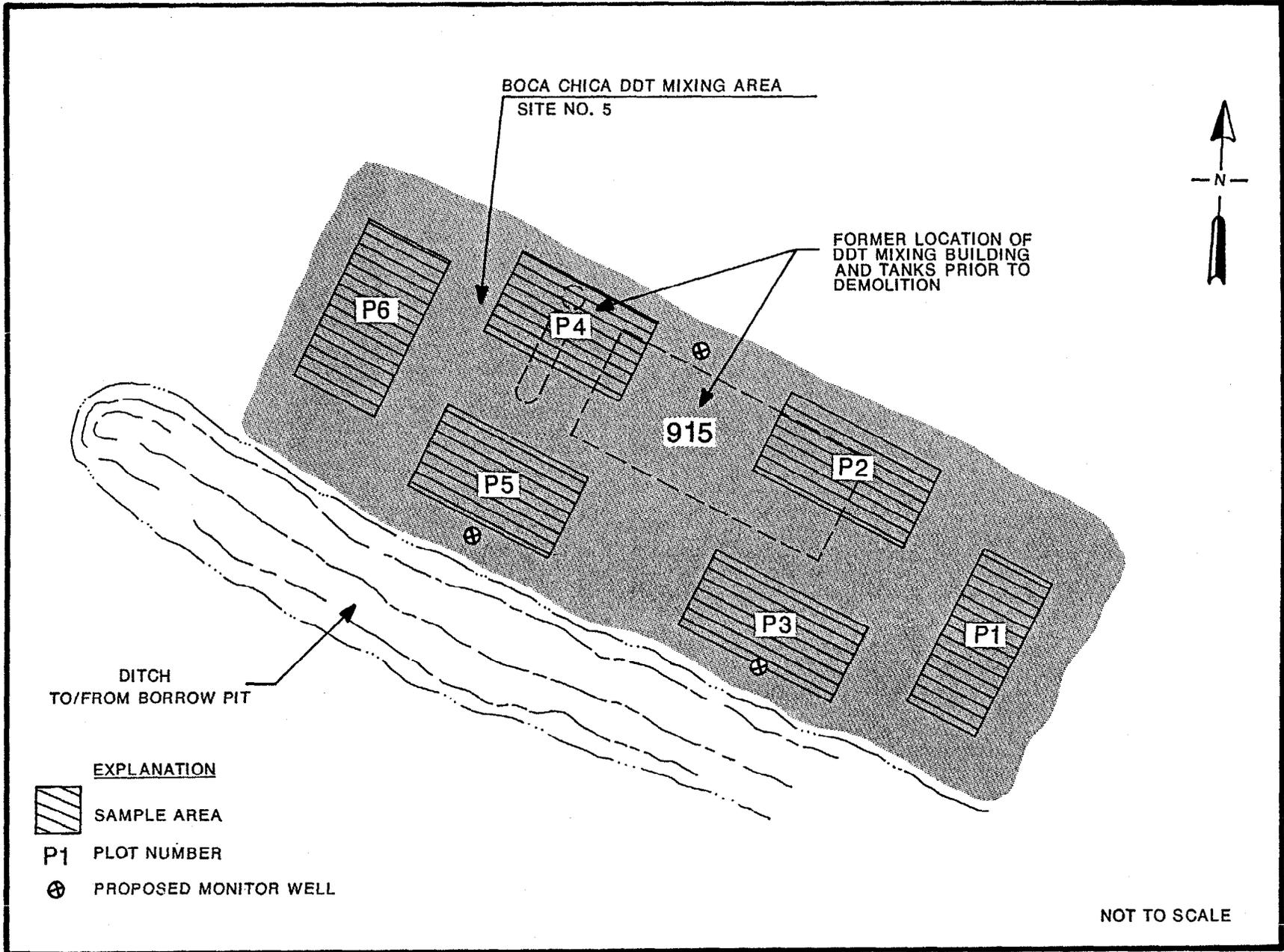
BOCA CHICA DDT MIXING AREA (SITE NO. 5)

General Description

The Boca Chica DDT Mixing Area is located next to a drainage ditch connected to a large borrow pit along the west side of runway 13 (Figure 8). DDT mixing operations were conducted on this site in Building 915 (demolished in 1982) from the 1940's to the early 1970's. Disposal at the site was not intentional but probably resulted from spillage. Two above-ground tanks on concrete foundations (a 500-gallon mixing tank and a 1,000-gallon storage tank) were located to the west of the building. During the removal of the tanks, some spillage reportedly occurred.

Findings

The soil sampling of this site proceeded in the same manner as at Sites 2 and 3. The laboratory analyses indicate that most of the soil samples contained pesticides throughout the 3-ft sampling range (see Table 5). The highest concentrations detected in the P-5 sampling plot ranged from 81 to 936 ppm of DDT and its daughter products DDE and DDD. Concentrations in the other samples were generally much less except in the 1-ft sample from plot P-6, which contained 89 ppm of these constituents. In addition, other pesticides were detected, including Alpha-, Beta-, Gamma- and Delta-BHC. However, these concentrations were generally much lower than the concentrations of DDT and its daughter products.



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Figure 8. Site Plan Showing Soil Sampling Plots at the Boca Chica DDT Mixing Area and Proposed Monitor-Well Locations (Site No. 5)

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Table 5. Summary of DDT^{1/}
Concentrations in Soil Samples from Site 5

(Concentrations in ppm)

Depth (ft)	Plots					
	P-1	P-2	P-3	P-4	P-5	P-6
0-1	BDL ^{2/}	0.0054	7.40 ^{3/}	2.667	936.00 ^{6/}	89.0
1-2	BDL	BDL	4.99 ^{4/}	0.0943	81.00 ^{7/}	0.76
2-3	BDL	0.0020	2.74 ^{5/}	2.800	95.00	2.90

1/ DDT and its daughter products DDE and DDD.

2/ BDL means below the laboratory detection limit.

3/ Delta-BHC also detected at 0.290 ppm.

4/ Alpha-BHC (0.12 ppm) and Delta-BHC (0.22 ppm) also detected in samples.

5/ Delta-BHC (0.15 ppm) also detected in samples.

6/ Alpha- (23.0 ppm), Beta- (4.7 ppm), Gamma- (25.0 ppm), and Delta-BHC (27.0 ppm) also detected in samples.

7/ Alpha-BHC (1.6 ppm) and Delta-BHC (1.9 ppm) also detected in samples.

Recommendations

Based on these findings, it is recommended that additional soil samples be collected in the vicinity of subplots 3, 4, and 6 to further delineate the extent of pesticides in the soil. The samples will be collected from the uppermost foot of soil because this area contains the greatest concentration of pesticides. The samples will be analyzed for pesticides by EPA method 608. Also, it is recommended that three monitor wells be installed at the locations shown in Figure 8 and that the ground water be sampled and analyzed for pesticides by EPA method 608. This data will be used to evaluate environmental impacts or remediation criteria.

FLEMING KEY NORTH LANDFILL (SITE NO. 7)

General Description

The Fleming Key North Landfill covers approximately 30 acres on the northern end of Fleming Key, as shown in Figure 9. Reportedly, 4,000 to 5,000 tons of unknown waste from the Naval Station were disposed of at the landfill annually between 1952 and 1962.

The open trench and fill method was used during landfill operation; trenches were approximately 25-ft wide, 10-ft deep, and 500 to 1,000 ft in length, and typically contained about 3 ft of sea water in the bottom. The wastes disposed of in the trenches were covered at the end of each working day with soil. Malathion, DDT, and diesel oil were sprayed on the landfill to control pests and insects.

In 1977, a building housing the U.S. Department of Agriculture Animal Import Center was constructed over a portion of the landfill. During the construction, wastes were excavated and transferred to an area to the immediate west, which created an extensive mound approximately 4 ft high. An impermeable clay and a synthetic liner were installed under the building, and gas vents were drilled to prevent the build-up of methane gas in the building.

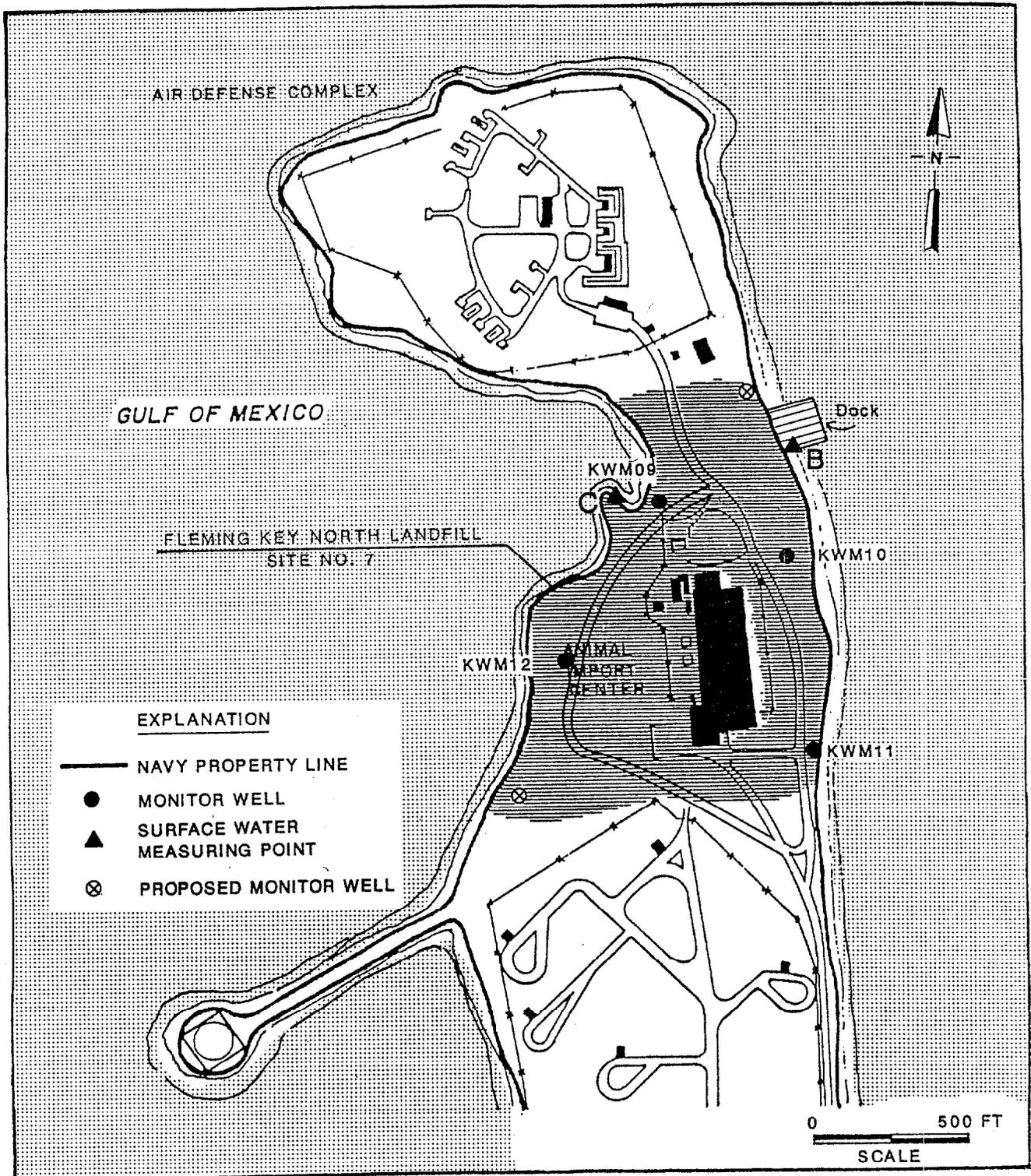


Figure 9. Site Plan Showing Installed and Proposed Monitor-Well Locations at the Fleming Key North Landfill (Site No. 7)

Findings

Four shallow monitor wells (KWM09, KWM10, KWM11, and KWM12) were installed to depths of between 9.5 and 12 ft (Table 1) at locations shown in Figure 9. Ground-water elevations determined for this site range from 0.29 to 0.79 ft msl and are influenced tidally.

Water-quality samples were collected from each well and analyzed for pH, specific conductance, EPA priority pollutants, and TDS. Results of these analyses (Appendix B, Section 3) indicate that the TDS ranged from 36,000 to 54,000 ppm and that no acid extractables, PCBs, or pesticides were detected; one base-neutral extractable, diethylphthalate, was detected at a concentration of 1.1 ppb. VOCs were detected in wells KWM10, KWM11, and KWM12 at concentrations below 5 ppb. Analyses for priority pollutant metals indicate that the concentrations of copper, mercury, and arsenic were above detection limits, the highest concentrations of these metals being 0.07, 0.062, and 0.007 ppm, respectively.

Recommendations

Based on these findings, it is recommended that two additional monitor wells be installed at the locations shown in Figure 9. A one-year sampling program (quarterly) should be implemented during which ground water from each well (existing or proposed) will be analyzed for VOCs (EPA Method 624), base-neutral extractables (EPA Method 625), EPA

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priority pollutant metals, and TDS. Water-level measurements should be collected at the time of sampling along with field parameter measurements (temperature, pH, and specific conductance). This information will constitute a data base for preparing monitoring plans, risk assessments, feasibility studies, or remedial action plans.

FLEMING KEY SOUTH LANDFILL (SITE NO. 8)

General Description

The Fleming Key South Landfill covers an area of approximately 45 acres in the southern part of Fleming Key. This area, shown in Figure 10, was operated as a landfill from 1962 until 1980. From 1962 to 1966, it is estimated that 4,000 to 5,000 tons of waste from the Naval Station were disposed of annually. Beginning in 1966, the public works activities of NAS-Key West were combined with those of the Naval Station. At that time, the wastes from the NAS-Boca Chica were also being disposed of at this site, increasing the annual amount of waste to approximately 8,000 tons.

Typical wastes disposed of at the site were general refuse from the Naval and Air Stations; reportedly, sewage sludge, waste oil, hydraulic fluid, paint, paint thinner, and solvents from the Air Station shops also were disposed of at this landfill. The open-trench disposal method was practiced, with the trenches being constructed in a manner similar to that at Site No. 7. The trenches were partially full of sea water when the wastes were disposed. Wet garbage was placed directly into one end of the trench and combustible wastes were taken to the western portion of the site and burned. The ashes and unburned wastes then were placed into the remainder of the trench. DDT, malathion, and

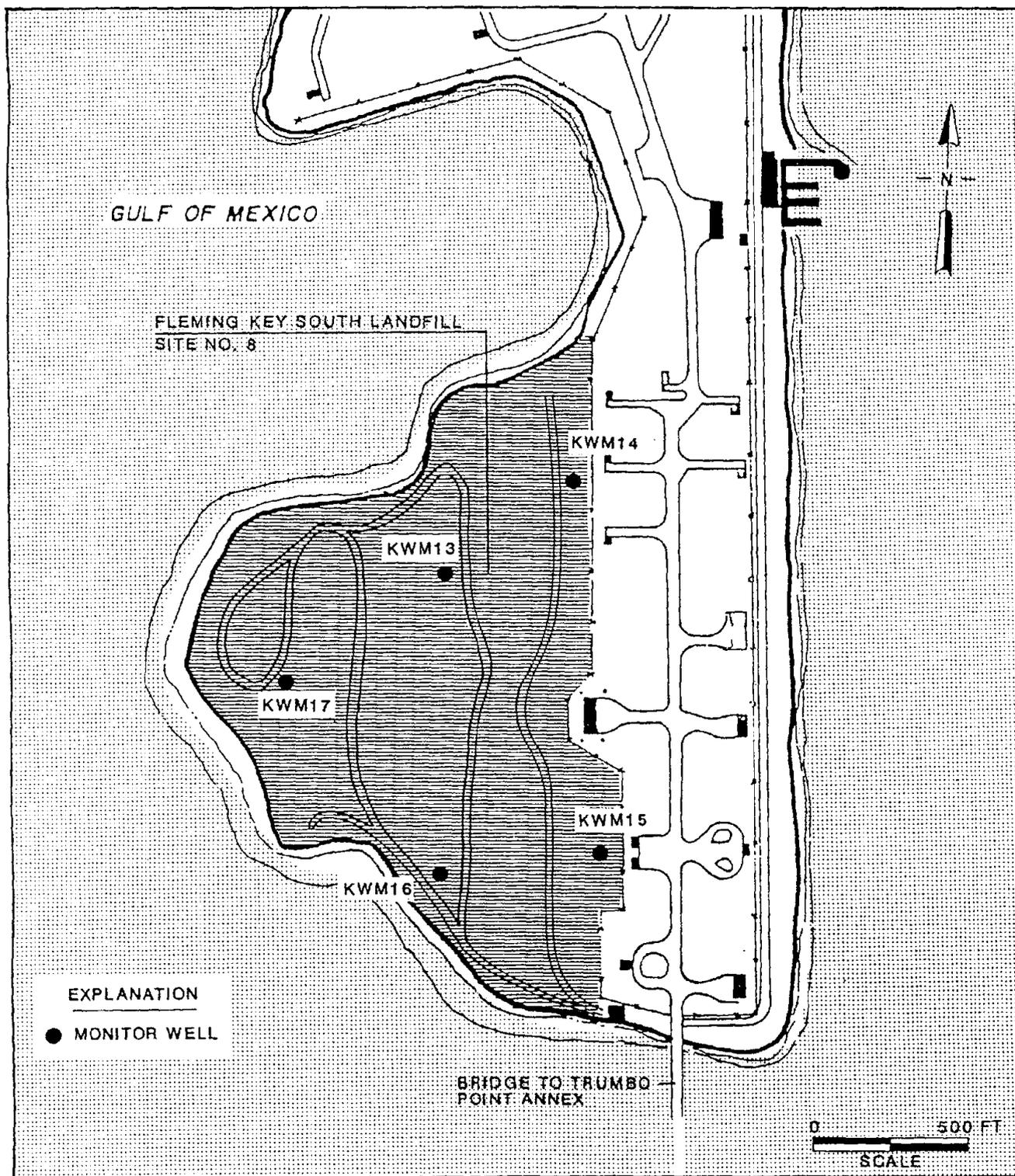


Figure 10. Site Plan Showing Installed Monitor-Well Locations at the Fleming Key South Landfill (Site No. 8)

diesel oil were sprayed on the landfill to control pests and insects.

Findings

Five shallow monitor wells (KWM13 through KWM17) were installed at this site to depths of between 12 ft and 22 ft (Table 1). Ground-water levels measured on July 10 and August 4, 1986, (Table 2) ranged from 0.35 ft to 0.9 ft msl.

Water-quality samples were collected from each well and analyzed for pH, specific conductance, TDS, and EPA priority pollutants. Results of the analyses (Appendix B, Section 4) indicate that concentrations of TDS ranged from 15,000 to 43,000 ppm and that no acid extractables, pesticides, or PCBs were detected. Concentrations of VOCs were above the detection limit in two of the wells (KWM13 and KWM17); however, except for chlorobenzene (71 ppb in KWM13), concentrations of the VOCs were all below 10 ppb. Three base-neutral extractable compounds were reported in concentrations above the detection limit but below 5 ppb in wells KWM13, KWM14, and KWM17. Arsenic, copper, and mercury were detected in all samples, the highest concentrations being 0.007, 0.30, and 0.62 ppm, respectively.

Recommendations

Based on these findings, it is recommended that a one-year sampling program (quarterly) be implemented during

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which ground water from each existing well would be analyzed for VOCs (EPA Method 624), base-neutral extractables (EPA Method 625), EPA priority pollutant metals, and TDS. Water-level measurements should be collected at the time of sampling along with field parameter measurements (temperature, pH, and specific conductance). This information will constitute a data base for preparing monitoring plans, risk assessments, feasibility studies, or remedial action plans.

TRUMBO POINT TANK FARM (SITE NO. 9)

General Description

The Trumbo Point Tank Farm is located immediately east of the piers at the Trumbo Point Annex, as shown in Figure 11. The Annex was constructed in 1918 as a seaplane base using dredged materials. Fuel for ships and aircraft at the NAS-Key West is received at this facility from tankers and then distributed via buried transmission lines to either Truman Annex or NAS-Boca Chica. Fuels that have been stored at this site include No. 6 fuel oil, Bunker C oil, diesel oil, aviation gasoline, and JP-4 and JP-5 jet fuels. Presently, only diesel fuel and JP-5 are stored at the site.

G&M previously prepared a report on a hydrogeologic investigation performed at this site, entitled "Subsurface Hydrocarbon Investigation, June 1985." During that study, ten shallow monitor wells (wells with MW designations) were installed at the locations shown on Figure 11; free or undissolved hydrocarbons were detected in two of the wells (MW-4 and MW-7) at that time. Wells MW-3 and MW-6 have since been destroyed.

Findings

Fifteen additional soil borings and six new monitor wells were installed during the present program. Six water-quality samples were collected from selected wells

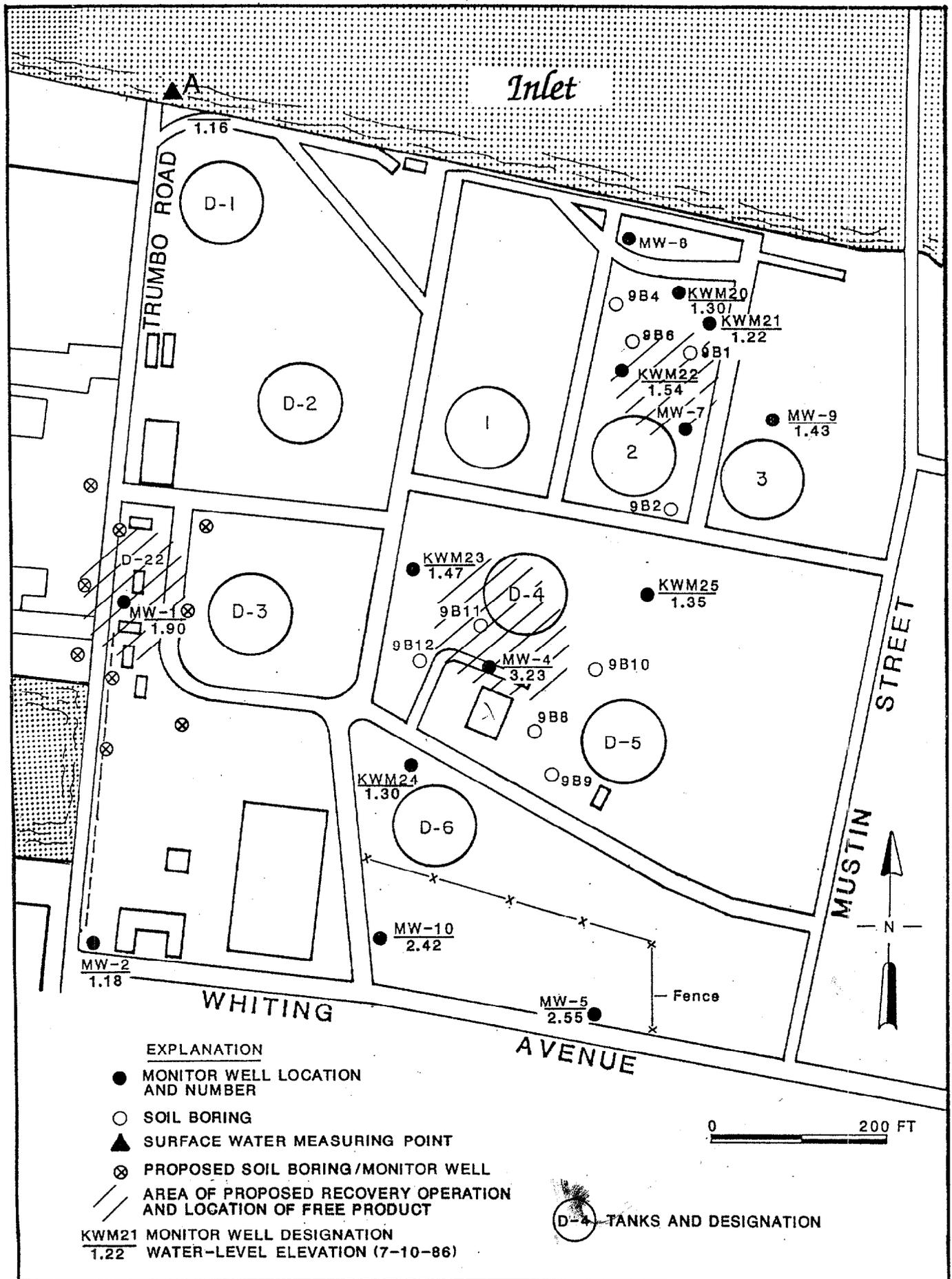


Figure 11. Site Plan Showing Installed and Proposed Monitor-Well Locations at the Trumbo Point Tank Farm (Site No. 9)

(KWM20, KWM25, MW2, MW5, MW9, and MW10) and analyzed for purgeable aromatic compounds and base-neutral extractable compounds. Results of these analyses (Appendix B, Section 5) indicate that the concentrations of TDS ranged from 840 to 2,300 ppm. Purgeable aromatics were detected at only one well, MW9, where the concentration of benzene was 8,000 ppb and the concentration of ethylbenzene was 2,500 ppb. Only one base-neutral extractable compound, naphthalene, was reported in a concentration of 180 ppb in well MW9.

Several of the monitor wells (MW1, MW4, MW7, KWM22, and KWM23) contained layers of free hydrocarbons floating on the water table (see Table 6). The water-level measurements made in those wells (see Table 2) have been adjusted to account for the thickness of the hydrocarbons. The known areas of hydrocarbon contamination are shown in Figure 11.

Recommendations

Remedial measures should be undertaken at this site. At Tank D-4 and Jet Fuel Tank No. 2, the extent of free hydrocarbons is reasonably well defined, so that recovery operations could be designed. Present thinking is that the recovery operation would involve installation of wells and trenches, from which the free hydrocarbons would be skimmed. A Remedial Action Plan should be prepared for these two areas, describing the elements of the program and the alternatives for disposal of recovered ground water.

Table 6. Product Thickness Measurements Collected
During July and August 1986

Monitor Well	Product Thickness (ft)		
	7-9-86	7-10-86	8-4-86
KWM20	0 ^{1/}	0	0
KWM21	-- ^{2/}	0	0
KWM22	-- ^{3/}	4.80	0
KWM23	2.66	2.96	5.8
KWM24	--	0	0
KWM25	0	0	0
MW1	0.47	0.39	0.61
MW2	0	0	--
MW4	--	0.16	0.48
MW5	0	0	0
MW7	--	1.59	1.20
MW9	0	0	0
MW10	0	0	0

1/ 0 Means no free product.

2/ -- Means no measurement taken.

3/ Free product was detected but the exact thickness was not determined.

Note: Monitor-well designations beginning with "MW" were installed during another investigation.

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In the area just west of Tank D-3, where the extent of contamination is unknown, nine additional soil borings would be installed to better delineate the horizontal extent of hydrocarbon contamination. Four of these borings would be converted to monitor wells to be used for water-level measurements and water-quality sampling for aromatic hydrocarbons and TDS.

FIRE-FIGHTING TRAINING AREA (SITE NO. 10)

General Description

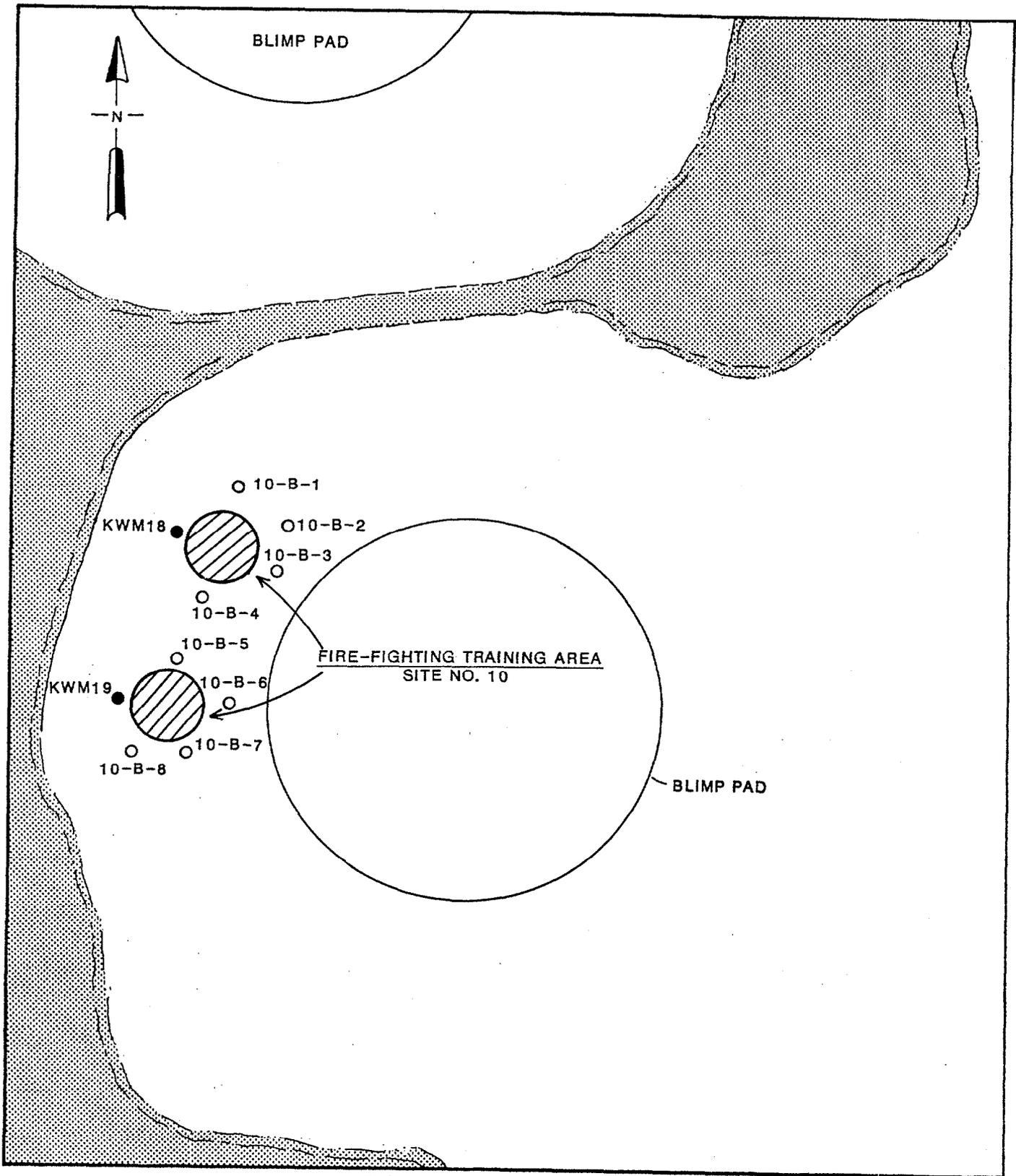
The Fire-Fighting Training Area, shown in Figure 12, is located immediately west of the southern blimp pad. The site contains junk vehicles and aircraft that are used for fire-fighting training. The junk vehicles are ignited using JP-5, waste oils, or hydraulic fluids as fuel. The area surrounding the vehicles shows visible evidence of burning and oil staining.

Findings

Ten soil borings and two shallow monitor wells (KWM18 and KWM19) were installed to depths of 11 ft at locations shown in Figure 12. Water-quality samples were collected from the monitor wells and analyzed for VOCs, PCBs, and TDS. Results of these analyses indicate that the concentrations of TDS were 2,200 ppm in well KWM18 and 38,000 ppm in well KWM19. No PCBs were detected in water samples collected from this site and only methylene chloride (believed to be an artifact of the analytical laboratory) was detected in the VOC analyses.

Recommendations

It is recommended that the ground water from both monitor wells be sampled (one sampling event) for base-neutral extractable compounds (EPA Method 625). If no



EXPLANATION
 KWM-18 ● MONITOR WELL
 10-B-8 ○ SOIL BORING

0 100 FT
 SCALE

Figure 12. Site Plan Showing Installed Monitor-Well Locations at the Fire-Fighting Training Area (Site No. 10)

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base-neutral compounds are detected, this site should be excluded from further study.

SUMMARY OF RECOMMENDATIONS

The results of the Verification Study show that additional investigation should be undertaken at eight of the sites (see Table 7). The proposed work consists of installation of soil borings, monitor wells, or soil sampling at Sites Nos. 1, 3, 4, 5, 7, 8, and 9, and water-level measurements and additional water-quality sampling at all of the above sites and Site No. 10. In-situ permeability testing (slug tests) should be performed on selected wells to provide a basis for estimating shallow ground-water flow rates. A work plan will be prepared to discuss this additional work in detail.

A Remedial Action Plan should be prepared for Site No. 9 to evaluate the potential alternatives for recovery of free product. The plan would also discuss options for the disposal of recovered free product and contaminated ground water. All of this information will constitute a data base for preparing monitoring programs, risk assessments, feasibility studies, or additional remedial action plans.

Table 7. Summary of Recommendations

Site Name and Number	Additional Monitor Wells	Chemical Analyses ^{1/} Ground Water	Soil	Comments
Refuse Disposal Area (Site No. 1)	2	VOCs, B/N Ex ₂ /PP metals, TDS		Quarterly sampling for one year.
Transformer Oil Disposal Area (Site No. 2)	0			No additional work recommended.
Truman Annex DDT Mixing Area (Site No. 3)	3	Pesticides ^{3/}	Pesticides (20)	Quarterly sampling for one year. (Ground water only)
Open Disposal Area (Site No. 4)	2	VOCs, B/N Ex ₂ /PP metals, TDS		Quarterly sampling for one year.
Boca Chica DDT Mixing Area (Site No. 5)	3	Pesticides	Pesticides (20)	Quarterly sampling for one year. (Ground water only)
Fleming Key North Landfill (Site No. 7)	2	VOCs, B/N Ex ₂ /PP metals, TDS		Quarterly sampling for one year.
Fleming Key South Landfill (Site No. 8)	0	VOCs, B/N Ex ₂ /PP metals, TDS		Quarterly sampling for one year.
Trumbo Point Tank Farm (Site No. 9)	4	BTX ^{4/} Base-neutral extractable, TDS		Quarterly sampling for one year. Additional work should include installation of 9 soil borings and preparation of a remedial action plan (including evaluation of potential recovery operations).
Fire-Fighting Training Area (Site No. 10)	0	B/N Ex. ^{5/}		Resampling (one time only).

NOTES:

- 1/ Water-quality samples will be analyzed in the field for temperature, pH, and specific conductance.
- 2/ VOCs (EPA Method 624), B/N ex. means base-neutral extractables (EPA Method 625); PP metals (EPA Priority Pollutant metals; TDS (total dissolved solids).
- 3/ Pesticides (EPA Method 608).
- 4/ BTX means aromatic hydrocarbons (benzene, toluene, xylene, and ethyl benzene) quantifiable by EPA Method 602.
- 5/ B/N Ex - Base-neutral extractables (EPA Method 625)

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- Envirodyne Engineers, Inc., 1985, Initial Assessment Study.
- Parker, G.G., et al, 1955, Water Resources of Southeastern Florida, U.S. Geological Survey, Water-Supply Paper 1255.
- White, W.A., 1970, The Geomorphology of the Florida Peninsula, State of Florida Department of Natural Resources, Geological Bulletin No. 51.

APPENDIX A
Lithologic Logs

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LITHOLOGIC LOG FOR MONITOR WELL KWM-01

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, fine to medium-grained, gray, mixed with gravel fill, schist not natural, some limestone.....	0 - 10.0	10.0
Fill, mixed with limestone gravel and silt, old brick, quartz sand, fine-grained, gray.....	10.0 - 13.0	3.0
Limestone, fragmented, sandy, fine to medium-grained, carbonate, partially oolitic, buff, some shell hash.....	13.0 - 18.0	5.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-02

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, fine to medium-grained, organics mixed with limestone fragments,	0 - 8.0	8.0
Organics, burnt wood clay.....	8.0 - 10.0	2.0
Creosote and wood mixed with small amount of clay.....	10.0 - 12.0	2.0
Limestone, very fractured, mixed with carbonate silt and clay, buff, some oolitic sands.....	12.0 - 18.0	6.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-03

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, fine-grained, gray, mixed with fragments of limestone (top soil)....	0 - 8.0	8.0
Clay, gray to black, mixed with limestone fragments,.....	8.0 - 9.5	1.5
Limestone, very friable, silty, buff.....	9.5 - 18.0	8.5

LITHOLOGIC LOG FOR MONITOR WELL KWM-04

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, fine to medium-grained, gray, glass fragments, metal fragments, etc.....	0 - 4.5	4.5
Sand, quartz, fine to medium-grained, slightly clayey, mixed with brown charcoal (burnt wood).....	4.5 - 6.5	2.0
Limestone, very weathered, clayey, buff...	6.5 - 8.0	1.5
Sands, oolitic, mixed with shell hash, buff, well sorted	8.0 - 14.0	6.0
Limestone, hard, fragmented, mixed with silt, some oolites and shell hash.....	14.0 - 18.0	4.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-05

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, layered with organics.....	0 - 0.5	0.5
Limestone gravel mixed with carbonate sand, fine to medium-grained silt, mixed with shell hash.....	0.5 - 10.0	9.5

LITHOLOGIC LOG FOR MONITOR WELL KWM-06

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Clay, carbonate, mixed with peat, gray to black.....	0 - 4.0	4.0
Limestone, fragmented mixed with sand and silt, carbonate, fine to medium-grained, shell hash with carbonate clay lenses.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-07

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Clay, carbonate, mixed with creosote and peat, gray to buff, some limestone fragments.....	0 - 0.5	0.5
Sand, fine to medium-grained, carbonate, silty, mixed with limestone fragments.....	0.5 - 10.0	9.5

LITHOLOGIC LOG FOR MONITOR WELL KWM-08

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, volitic, carbonate, fine, silty, mixed with limestone fragments and shell hash.....	0 - 12.0	12.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-09

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Fill, limestone.....	0 - 4.0	4.0
Unidentified refuse, sand, carbonate, medium to coarse-grained, silty with limestone fragments.....	4.0 - 8.0	4.0
Clay, carbonate, gray to buff.....	8.0 - 10.0	2.0
Shelby.....	10.0 - 12.0	2.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-10

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Limestone fill, buff to brown, mixed with carbonate silt and fine to medium-grained sand,.....	0 - 12.0	12.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-11

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Limestone gravel, mixed with carbonate silt, pieces of wire and trash.....	0 - 4.0	4.0
Limestone, mixed with carbonate, silty, clayey, black clay, unidentified refuse...	4.0 - 6.0	2.0
Sand, carbonate, fine to medium-grained, silty, mixed with limestone gravel, gray to buff.....	6.0 - 12.0	6.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-12

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, fine to medium-grained, mixed with limestone fragments and organics.....	0 - 6.0	6.0
Limestone, friable, mixed with carbonate clay.....	6.0 - 8.5	2.5
Limestone, very hard, silty, buff.....	8.5 - 9.5	1.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-13

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Limestone fill, sandy, quartz, gravel, mixed with refuse.....	0 - 8.0	8.0
Sand, carbonate, gravel, buff.....	8.0 - 10.0	2.0
Clay, carbonate, buff.....	10.0 - 12.5	2.5
Shelby, no recovery.....	12.5 - 14.5	2.0
Clay, carbonate, cream.....	14.5 - 16.5	2.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-14

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, medium to coarse-grained, silty, buff.....	0 - 6.0	6.0
Sand, carbonate, medium to coarse-grained, with limestone fragments, gray.....	6.0 - 8.0	2.0
Clay, carbonate, soft, with shell hash, gray to buff.....	8.0 - 12.0	4.0
Sand, carbonate, medium to coarse-grained, silty, mixed with shell hash and lime- stone fragments.....	12.0 - 14.0	2.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-15

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Limestone, friable, buff.....	0 - 6.0	6.0
Sand, carbonate, silty, fine to medium- grained,.....	6.0 - 8.0	2.0
Sand, carbonate, silty, fine to medium- grained, limestone fragments, buff.....	8.0 - 10.0	2.0
Clay, carbonate, mixed with shell hash, gray.....	10.0 - 14.0	4.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-16

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Limestone fill, buff.....	0 - 4.0	4.0
Limestone fill, tan.....	4.0 - 6.0	2.0
Sand, carbonate, medium-grained, buff.....	6.0 - 13.0	7.0
Clay, carbonate, buff.....	13.0 - 14.0	1.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-17

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, quartz, black.....	0 - 4.0	4.0
Fill, sand, fine to medium-grained, carbonate, glass chips, etc., black, tan, not natural.....	4.0 - 12.0	8.0
Limestone, gravel, buff to gray, mixed with unidentified refuse.....	12.0 - 18.0	6.0
Limestone gravel, clayey.....	18.0 - 23.0	5.0
Sand, carbonate, fine-grained, clayey, cream.....	23.0 - 24.0	1.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-17

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Fill, limestone gravel, shell hash, glass fragments,.....	20.0 - 22.0	2.0
Clay, carbonate, buff.....	22.0 - 23.0	1.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-18

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to coarse-grained, mixed with limestone and shell hash, buff.....	0 - 10.0	10.0

LITHOLOGIC LOG FOR MONITOR WELL KWM-19

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to coarse-grained, silty, mixed with limestone gravel and shell fragments, buff to light tan.....	0 - 8.0	8.0
Limestone, very friable, mixed with silt and clay, buff.....	8.0 - 10.0	2.0

LOG FOR BORING 9-B1

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Fill, sand, carbonate, fine to coarse-grained, mixed with limestone fragments, buff.....	0 - 4.0	4.0
Clay, carbonate, slightly sandy.....	4.0 - 9.0	5.0
Sand, carbonate, fine to medium-grained, mixed with limestone and shell hash.....	9.0 - 10.0	1.0

LITHOLOGIC LOG FOR BORING 9-B2

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, mixed with shell hash.....	0 - 2.0	2.0
Sand, quartz, fine to medium-grained, very organic, black.....	2.0 - 4.0	2.0
Sand, carbonate, fine to medium-grained, clayey, mixed with shell hash.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 9-B3

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, buff, mixed with soil.....	0 - 3.0	3.0
Clay, sandy, fine to medium-grained carbonate, buff to gray.....	3.0 - 13.0	10.0
Limestone.....	13.0 - 15.0	2.0

LITHOLOGIC LOG FOR BORING 9-B4

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, very clayey, buff.....	0 - 10.0	10.0

LITHOLOGIC LOG FOR BORING 9-B5

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, silty, mixed with organics.....	0 - 4.0	4.0
Clay, sandy, fine to medium-grained, carbonate, mixed with limestone fragments and shell hash, buff, gray.....	4.0 - 13.0	9.0
Limestone, mixed with fine to medium-grained carbonate sand.....	13.0 - 15.0	2.0

LITHOLOGIC LOG FOR BORING 9-B6

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, mixed with organics.....	0 - 4.0	4.0
Sand, carbonate, fine to medium-grained, very clayey, carbonate.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 9-B7

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, very clayey, gray to buff.....	0 - 8.0	8.0
Sand, carbonate, fine to medium-grained, silty, much shell hash.....	8.0 - 10.0	2.0
Clay, sandy, fine to medium-grained, carbonate, mixed with shell hash.....	10.0 - 15.0	5.0

LITHOLOGIC LOG FOR BORING 9-B8

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, clayey, mixed with shell.....	0 - 4.0	4.0
Clay, sandy, fine to medium-grained, carbonate, some shell hash, gray.....	4.0 - 8.0	4.0
Sand, carbonate, fine to medium-grained, mixed with limestone fragments and shell hash, gray to buff.....	8.0 - 10.0	2.0

LITHOLOGIC LOG FOR BORING 9-B9

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, clayey, mixed with shell hash, gray.....	0 - 3.0	3.0
Clay, carbonate, slightly sandy, fine- grained, mixed with some shell hash, gray.	3.0 - 9.0	6.0
Limestone, buff, friable, mixed with shell fragments.....	9.0 - 10.0	1.0

LITHOLOGIC LOG FOR BORING 9-B10

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to coarse-grained, silty, mixed with organics and shell hash.	0 - 3.0	3.0
Clay, carbonate, sandy, fine-grained, mixed with some shell hash.....	3.0 - 10.0	7.0

LITHOLOGIC LOG FOR BORING 9-B11

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, clayey, mixed with shell hash, gray to buff	0 - 2.0	2.0
Clay, carbonate, sandy, fine-grained, mixed with some shell hash.....	2.0 - 10.0	8.0

LITHOLOGIC LOG FOR BORING 9-B12

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, clayey, mixed with some organic, gray.....	0 - 3.0	3.0
Clay, sandy, carbonate, fine-grained, gray, mixed with some shell hash.....	3.0 - 10.0	7.0

LITHOLOGIC LOG FOR BORING 9-B13

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, organics, buff to black.....	0 - 2.0	2.0
Sand, carbonate, fine to medium-grained, clayey, buff to gray.....	2.0 - 4.0	2.0
Clay, carbonate, sandy, fine-grained, gray, shell hash.....	4.0 - 14.0	10.0
Limestone, very weathered, buff.....	14.0 - 15.0	1.0

LITHOLOGIC LOG FOR BORING 9-B14

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, clayey, mixed with some shell hash.....	0 - 3.0	3.0
Clay, carbonate, sandy, fine-grained, layered with organics, various layers, buff to gray to black.....	3.0 - 8.0	5.0
Clay, carbonate, sandy, fine-grained, gray.....	8.0 - 10.0	2.0
Shelby tube.....	10.0 - 12.0	2.0
Limestone, weathered, buff	12.0 - 15.0	3.0

LITHOLOGIC LOG FOR BORING 9-B15

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to medium-grained, clayey, buff.....	0 - 3.0	3.0
Clay, carbonate, sandy, fine-grained, with some shell hash, gray.....	3.0 - 14.0	11.0
Limestone, very weathered, buff.....	14.0 - 15.0	1.0

LITHOLOGIC LOG FOR BORING 10-B1

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, carbonate, fine to coarse-grained, silty, mixed with limestone and shell hash, gray.....	0 - 4.0	4.0
Sand, carbonate, fine to coarse-grained, very silty, mixed with limestone fragments and shell hash, tan.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B2

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, carbonate, very silty, mixed with limestone fragments.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B3

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, fine-grained, carbonate, very silty, mixed with limestone fragments, buff.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B4

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, silty, mixed with glass fragments and non-indigenous material, also mixed with limestone, gravel, tan to gray.....	0 - 3.0	3.0
Sand, carbonate, fine to coarse-grained, silty, mixed with limestone fragments, buff.....	3.0 - 10.0	7.0

LITHOLOGIC LOG FOR BORING 10-B1

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, carbonate, very silty, mixed with limestone, buff.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B6

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B7

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	4.0 - 10.0	6.0

LITHOLOGIC LOG FOR BORING 10-B8

<u>Description</u>	<u>Depth (ft)</u>	<u>Thickness (ft)</u>
Sand, fine to medium-grained, carbonate, very silty, mixed with limestone fragments, buff to gray.....	0 - 4.0	4.0
Sand, fine-grained, carbonate, very silty, mixed with limestone fragments, buff.....	4.0 - 10.0	6.0

APPENDIX B

Water-Quality Analyses of
Ground-Water Samples

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Table 1. Field Parameter Measurements Collected During Ground-Water Quality Sampling, July 8 and 9, 1986

Monitor Well Number	Temperature (°C)	pH	Specific Conductivity (umhos/cm)	Total Dissolved Solids (mg/l)
<u>Site 1</u>				
KWM01	28.0	7.3	>8,000	26,000
KWM02	28.5	6.3	>8,000	30,000
KMW03	29.0	6.9	>8,000	23,000
KWM04	27.0	6.3	7,500	7,000
<u>Site 4</u>				
KWM05	28.0	6.4	>8,000	24,000
KWM06	28.0	7.0	>8,000	31,000
KWM07	29.0	6.5	>8,000	42,000
KWM08	28.0	6.7	>8,000	32,000
<u>Site 7</u>				
KWM09	28.0	6.7	>8,000	54,000
KWM10	28.0	6.6	>8,000	40,000
KWM11	28.0	6.5	>8,000	46,000
KWM12	28.0	6.4	>8,000	36,000
<u>Site 8</u>				
KWM13	31.5	7.1	>8,000	15,000
KWM14	27.0	6.8	>8,000	19,000
KWM15	26.5	6.8	>8,000	19,000
KWM16	27.5	7.0	>8,000	43,000
KWM17	29.0	6.4	>8,000	33,000
<u>Site 10</u>				
KWM18	30.5	6.6	3,100	2,200
KWM19	29.0	6.5	>8,000	38,000
<u>Site 9</u>				
KWM20	27.0	6.7	3,250	2,300
KWM25	28.0	6.2	1,450	1,100
MW 2 ^{1/}	31.0	6.6	1,350	840
MW 5 ^{1/}	31.0	6.9	1,400	910
MW 9 ^{1/}	30.0	6.8	1,800	1,200
MW10 ^{1/}	30.0	6.3	1,600	1,200

1/ Monitor wells installed during the "Subsurface Hydrocarbon Investigation," Trumbo Point, June 1985

Section 1
(Site No. 1)

SAMPLE IDENTIFIER: KWM-01
COMPUCHEM SAMPLE NUMBER: 93017

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	26000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0060	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.040	0.020
LEAD	BDL	0.0050
MERCURY	0.055	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-01
 COMPUCHEM SAMPLE NUMBER: 93014

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	3.9 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	79	(77-120)
4-Bromofluorobenzene	95	(85-121)
D ₈ -Toluene	101	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

COMPOUND LIST

-- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-01
COMPUCHEM® SAMPLE NUMBER: 93015

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-01
 COMPUCHEM® SAMPLE NUMBER: 93015

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHthalate	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHthalate	BDL	1.0
36B. 3,3'-DICHlorOBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHthalate	BDL	1.0
39B. CHRySENE	BDL	1.0
40B. DI-N-OCTYLPHthalate	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	45	(41-120)
2-Fluorobiphenyl	49	(44-119)
D ₁₄ -Terphenyl	44	(33-128)
D ₁₀ -Pyrene*	53	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-01
 COMPUCHEM® SAMPLE NUMBER: 93015

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	45	(23-121)
D ₅ -Phenol	37	(15-103)
2,4,6-Tribromophenol	58	(10-130)

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-01
 COMPUCEM® SAMPLE NUMBER: 93016

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	89	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM SAMPLE NUMBER: 92999

	<u>CONCENTRATION (MG/L)</u>	<u>DETECTION LIMIT (MG/L)</u>
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	30000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.007	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.04	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.64	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM SAMPLE NUMBER: 92996

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	3.3 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	1.6	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	4.3	1.0
28V. CHLOROENZENE	BDL	1.0
29V. ETHYLBENZENE	1.6	1.0
30V. m,-XYLENE	3.1	1.0
31V. o,p-XYLENE†	4.1	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	86	(77-120)
4-Bromofluorobenzene	103	(85-121)
D ₈ -Toluene	104	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM® SAMPLE NUMBER: 92997

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	7.4	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	7.5	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM® SAMPLE NUMBER: 92997

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	14	1.0
30B. ANTHRACENE	1.1	1.0
31B. DI-N-BUTYLPHthalate	BDL	1.0
32B. FLUORANTHENE	2.4	1.0
33B. PYRENE	1.0	1.0
34B. BENZIDINE	BDL	5.0
35B. BUTYLBENZYLPHthalate	BDL	1.0
36B. 3,3'-DICHlorOBENZIDINE	BDL	2.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHthalate	BDL	1.0
39B. CHRySENE	BDL	1.0
40B. DI-N-OCTYLPHthalate	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	34*	(41-120)
2-Fluorobiphenyl	30*	(44-119)
D ₁₄ -Terphenyl	25*	(33-128)
D ₁₀ -Pyrene**	40*	**

BDL=BELOW DETECTION LIMIT

*See Quality Assurance Notice #1

**Advisory Surrogate; therefore no control range.

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM® SAMPLE NUMBER: 92997

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>39</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>32</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>69</u>	<u>(10-130)</u>

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-02
 COMPUCHEM® SAMPLE NUMBER: 92998

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	84	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

SAMPLE IDENTIFIER: KWM-03
COMPUCHEM SAMPLE NUMBER: 93007

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	23000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0070	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.040	0.020
LEAD	BDL	0.0050
MERCURY	0.12	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-03
 COMPUCHEM SAMPLE NUMBER: 93004

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	5:2 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	90	(77-120)
4-Bromofluorobenzene	96	(85-121)
D ₈ -Toluene	114	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-03
 COMPUCHEM® SAMPLE NUMBER: 93005

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-03
 COMPUCHEM® SAMPLE NUMBER: 93005

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	49	(41-120)
2-Fluorobiphenyl	58	(44-119)
D ₁₄ -Terphenyl	44	(33-128)
D ₁₀ -Pyrene*	57	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- . ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-03
 COMPUCHEM® SAMPLE NUMBER: 93005

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>70</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>51</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>103</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-03
 COMPUCHEM® SAMPLE NUMBER: 93006

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	102	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

SAMPLE IDENTIFIER: KWM-04
COMPUCHEM SAMPLE NUMBER: 93013

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	7000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0060	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.020	0.020
LEAD	BDL	0.0050
MERCURY	0.046	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-04
 COMPUCHEM SAMPLE NUMBER: 93008

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	3.6 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	18	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	14	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
287. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	<u>82</u>	<u>(77-120)</u>
4-Bromofluorobenzene	<u>93</u>	<u>(85-121)</u>
D ₈ -Toluene	<u>112</u>	<u>(86-119)</u>

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-04
 COMPUCHEM® SAMPLE NUMBER: 93009

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-04
 COMPUCHEM® SAMPLE NUMBER: 93009

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	38†	(41-120)
2-Fluorobiphenyl	36†	(44-119)
D ₁₄ -Terphenyl	37	(33-128)
D ₁₀ -Pyrene*	45†	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice - #1

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-04
 COMPUCHEM® SAMPLE NUMBER: 93009

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	23	(23-121)
D ₅ -Phenol	16	(15-103)
2,4,6-Tribromophenol	30	(10-130)

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-04
 COMPUCHEM® SAMPLE NUMBER: 93010

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	94	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

Section 2
(Site No. 4)

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM SAMPLE NUMBER: 92818

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	24000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.010	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.04	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.048	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM® SAMPLE NUMBER: 92815

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	124	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM® SAMPLE NUMBER: 92814

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	34	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	6.4	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	3.4	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	9.1	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM® SAMPLE NUMBER: 92814

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	8.6	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	1.1	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	74	(41-120)
2-Fluorobiphenyl	49	(44-119)
D ₁₄ -Terphenyl	32†	(33-128)
D ₁₀ -Pyrene*	59	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice - #1

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM® SAMPLE NUMBER: 92814

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>103</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>97</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>125</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-05
 COMPUCHEM SAMPLE NUMBER: 92813

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	5.8 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	3.2	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	11	1.0
287. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	7.9	1.0
30V. m,-XYLENE	15	1.0
31V. o,p-XYLENE†	20	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D4-1,2-Dichloroethane	94	(77-120)
4-Bromofluorobenzene	85	(85-121)
Dg-Toluene	114	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-06
 COMPUCHEM SAMPLE NUMBER: 92834

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	31000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.007	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.06	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.065	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-06
 COMPUCHEM® SAMPLE NUMBER: 92833

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	99	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST

-- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-06
 COMPUCEM® SAMPLE NUMBER: 92832

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	1.2	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	1.2	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-06
 COMPUCHEM® SAMPLE NUMBER: 92832

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHthalate	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHthalate	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHthalate	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHthalate	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	44	(41-120)
2-Fluorobiphenyl	51	(44-119)
D ₁₄ -Terphenyl	52	(33-128)
D ₁₀ -Pyrene*	64	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-06
 COMPUCHEM® SAMPLE NUMBER: 92832

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	40	(23-121)
D ₅ -Phenol	32	(15-103)
2,4,6-Tribromophenol	91	(10-130)

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-06
 COMPUCHEM SAMPLE NUMBER: 92831

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	16	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.1 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	2.5	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	1.1	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
287. CHLOROBENZENE	1.2	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	86	(77-120)
4-Bromofluorobenzene	97	(85-121)
D ₈ -Toluene	93	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

SAMPLE IDENTIFIER: KWM-07
COMPUCHEM SAMPLE NUMBER: 92795

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	42000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	BDL	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.060	0.020
LEAD	BDL	0.0050
MERCURY	0.066	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-07
 COMPUCHEM® SAMPLE NUMBER: 92785

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	113	(48-136)*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-07
 COMPUCHEM® SAMPLE NUMBER: 92782

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	1.0	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-07
 COMPUCHEM® SAMPLE NUMBER: 92782

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	1.6	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	<u>23†</u>	<u>(41-120)</u>
2-Fluorobiphenyl	<u>24†</u>	<u>(44-119)</u>
D ₁₄ -Terphenyl	<u>24†</u>	<u>(33-128)</u>
D ₁₀ -Pyrene*	<u>29†</u>	<u>*</u>

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice - #1

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-07
 COMPUCHEM® SAMPLE NUMBER: 92782

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>66</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>62</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>118</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-07
 COMPUCHEM SAMPLE NUMBER: 92778

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	2.0 BG*	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	9.7	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	6.0	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	1.2	1.0
28V. CHLOROBENZENE	5.2	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	94	(77-120)
4-Bromofluorobenzene	105	(85-121)
D ₈ -Toluene	101	(86-119)

BDL= BELOW DETECTION LIMIT
 *See Quality Assurance Notice
 †Indistinguishable Isomers

SAMPLE IDENTIFIER: KWM-08
COMPUCHEM SAMPLE NUMBER: 92822

	<u>CONCENTRATION</u> (MG/L)		<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	32000		2.0
CYANIDE		BDL	0.30
ANTIMONY		BDL	0.20
ARSENIC	0.010		0.0050
BERYLLIUM		BDL	0.010
CADMIUM		BDL	0.010
CHROMIUM		BDL	0.030
COPPER	0.050		0.020
LEAD		BDL	0.0050
MERCURY	0.054		0.00050
NICKEL		BDL	0.030
SELENIUM		BDL	0.0050
SILVER		BDL	0.050
THALLIUM		BDL	0.050
ZINC		BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-08
 COMPUCEM® SAMPLE NUMBER: 92821

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	109	(48-136)*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-08
 COMPUCHEM® SAMPLE NUMBER: 92820

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-08
 COMPUCHEM® SAMPLE NUMBER: 92820

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	16†	(41-120)
2-Fluorobiphenyl	22†	(44-119)
D ₁₄ -Terphenyl	29†	(33-128)
D ₁₀ -Pyrene*	31†	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice - #1

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-08
 COMPUCHEM® SAMPLE NUMBER: 92820

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>27</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>27</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>58</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-08
 COMPUCHEM SAMPLE NUMBER: 92819

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	5.4 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	87	(77-120)
4-Bromofluorobenzene	98	(85-121)
D ₈ -Toluene	99	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

Section 3

(Site No. 7)

SAMPLE IDENTIFIER: KWM-09
COMPUCHEM SAMPLE NUMBER: 92808

	<u>CONCENTRATION</u> <u>(MG/L)</u>	<u>DETECTION LIMIT</u> <u>(MG/L)</u>
TOTAL DISSOLVED SOLIDS	54000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0060	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.050	0.020
LEAD	BDL	0.0050
MERCURY	0.057	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-09
 COMPUCHEM® SAMPLE NUMBER: 92806

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	1.1	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-09
 COMPUCHEM® SAMPLE NUMBER: 92806

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHthalate	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHthalate	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHthalate	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHthalate	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	15†	(41-120)
2-Fluorobiphenyl	13†	(44-119)
D ₁₄ -Terphenyl	12†	(33-128)
D ₁₀ -Pyrene*	15†	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-09
 COMPUCHEM® SAMPLE NUMBER: 92806

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	46	(23-121)
D ₅ -Phenol	44	(15-103)
2,4,6-Tribromophenol	85	(10-130)

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-09
 COMPUCHEM SAMPLE NUMBER: 92805

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.7 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D4-1,2-Dichloroethane	88	(77-120)
4-Bromofluorobenzene	95	(85-121)
Dg-Toluene	106	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM SAMPLE NUMBER: 92826

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	40000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.006	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.06	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.057	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM® SAMPLE NUMBER: 92825

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchlorendate	119	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM® SAMPLE NUMBER: 92824

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM® SAMPLE NUMBER: 92824

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	45	(41-120)
2-Fluorobiphenyl	57	(44-119)
D ₁₄ -Terphenyl	71	(33-128)
D ₁₀ -Pyrene*	66	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM® SAMPLE NUMBER: 92824

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>43</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>40</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>79</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-10
 COMPUCHEM SAMPLE NUMBER: 92823

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	6.8 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	1.1	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	2.3	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	85	(77-120)
4-Bromofluorobenzene	97	(85-121)
D ₈ -Toluene	103	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM SAMPLE NUMBER: 92838

	<u>CONCENTRATION (MG/L)</u>	<u>DETECTION LIMIT (MG/L)</u>
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	46000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.007	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.07	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.062	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM® SAMPLE NUMBER: 92837

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	119	(48-136)*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM® SAMPLE NUMBER: 92836

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM® SAMPLE NUMBER: 92836

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	70	(41-120)
2-Fluorobiphenyl	59	(44-119)
D ₁₄ -Terphenyl	58	(33-128)
D ₁₀ -Pyrene*	75	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM® SAMPLE NUMBER: 92836

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	42	(23-121)
D ₅ -Phenol	35	(15-103)
2,4,6-Tribromophenol	69	(10-130)

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-11
 COMPUCHEM SAMPLE NUMBER: 92835

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	3.1 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	0.8 J	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	2.0	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	4.4	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	4.0	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
287. CHLORO BENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p,-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D4-1,2-Dichloroethane	82	(77-120)
4-Bromofluorobenzene	106	(85-121)
Dg-Toluene	90	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

J=Estimated concentration; values are between the detection limit and one-half of that limit.

*See Quality Assurance Notice

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM SAMPLE NUMBER: 92812

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	36000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.006	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.05	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.046	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM® SAMPLE NUMBER: 92811

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	95	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM® SAMPLE NUMBER: 92810

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM® SAMPLE NUMBER: 92810

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	46	(41-120)
2-Fluorobiphenyl	55	(44-119)
D ₁₄ -Terphenyl	62	(33-128)
D ₁₀ -Pyrene*	71	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM® SAMPLE NUMBER: 92810

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>26</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>22</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>61</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-12
 COMPUCHEM SAMPLE NUMBER: 92809

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.9 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	1.2	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	<u>91</u>	<u>(77-120)</u>
4-Bromofluorobenzene	<u>96</u>	<u>(85-121)</u>
D ₈ -Toluene	<u>108</u>	<u>(86-119)</u>

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

Geraghty & Miller, Inc.

Section 4
(Site No. 8)

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM SAMPLE NUMBER: 93003

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	15000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	BDL	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.03	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.62	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM® SAMPLE NUMBER: 93002

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchlorendate	79	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM® SAMPLE NUMBER: 93001

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	4.6	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	2.5	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM® SAMPLE NUMBER: 93001

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	5.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	2.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	54	(41-120)
2-Fluorobiphenyl	47	(44-119)
D ₁₄ -Terphenyl	34	(33-128)
D ₁₀ -Pyrene*	50	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM® SAMPLE NUMBER: 93001

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>27</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>18</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>34</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-13
 COMPUCHEM SAMPLE NUMBER: 93000

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	3.8 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	1.8	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	71	1.0
29V. ETHYLBENZENE	1.3	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p,-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	% Recovery	Control Range%
D ₄ -1,2-Dichloroethane	92	(77-120)
4-Bromofluorobenzene	101	(85-121)
D ₈ -Toluene	116	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM SAMPLE NUMBER: 92830

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. CYANIDE, TOTAL	BDL	0.30
2. TOTAL DISSOLVED SOLIDS	19000	2.0
3. ANTIMONY, TOTAL	BDL	0.20
4. ARSENIC, TOTAL	0.006	0.005
5. BERYLLIUM, TOTAL	BDL	0.01
6. CADMIUM, TOTAL	BDL	0.01
7. CHROMIUM, TOTAL	BDL	0.03
8. COPPER, TOTAL	0.03	0.02
9. LEAD, TOTAL	BDL	0.005
10. MERCURY, TOTAL	0.049	0.0005
11. NICKEL, TOTAL	BDL	0.03
12. SELENIUM, TOTAL	BDL	0.005
13. SILVER, TOTAL	BDL	0.05
14. THALLIUM, TOTAL	BDL	0.05
15. ZINC, TOTAL	BDL	0.01

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM® SAMPLE NUMBER: 92829

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	116	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM® SAMPLE NUMBER: 92828

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	3.0	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM® SAMPLE NUMBER: 92828

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	54	(41-120)
2-Fluorobiphenyl	61	(44-119)
D ₁₄ -Terphenyl	64	(33-128)
D ₁₀ -Pyrene*	82	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM® SAMPLE NUMBER: 92828

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION*</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	2.0
2A. 2-CHLOROPHENOL	BDL	2.0
3A. 2-NITROPHENOL	BDL	2.0
4A. 2,4-DIMETHYLPHENOL	BDL	2.0
5A. 2,4-DICHLOROPHENOL	BDL	2.0
6A. P-CHLORO-M-CRESOL	BDL	2.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	2.0
8A. 2,4-DINITROPHENOL	BDL	10
9A. 4-NITROPHENOL	BDL	10
10A. 4,6-DINITRO-O-CRESOL	BDL	10
11A. PENTACHLOROPHENOL	BDL	10

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>23</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>21</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>37</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

*Less than the usual amount of sample was available for re-extraction which resulted in higher than normal detection limits.

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-14
 COMPUCHEM SAMPLE NUMBER: 92827

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.2 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	88	(77-120)
4-Bromofluorobenzene	97	(85-121)
D ₈ -Toluene	113	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

SAMPLE IDENTIFIER: KWM-15
COMPUCHEM SAMPLE NUMBER: 92804

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	19000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0060	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.30	0.020
LEAD	BDL	0.0050
MERCURY	0.052	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-15
 COMPUCHEM® SAMPLE NUMBER: 92803

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	109	(48-136)*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-15
 COMPUCHEM® SAMPLE NUMBER: 92800

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-15
 COMPUCHEM® SAMPLE NUMBER: 92800

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3' DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	BDL†	(41-120)
2-Fluorobiphenyl	BDL†	(44-119)
D ₁₄ -Terphenyl	BDL†	(33-128)
D ₁₀ -Pyrene*	BDL†	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice - #1

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-15
 COMPUCHEM® SAMPLE NUMBER: 92800

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>37</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>31</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>83</u>	<u>(10-130)</u>

BDL= BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-15
 COMPUCHEM SAMPLE NUMBER: 92799

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	2.1 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
31V. m-XYLENE	BDL	1.0
32V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D4-1,2-Dichloroethane	<u>88</u>	<u>(77-120)</u>
4-Bromofluorobenzene	<u>89</u>	<u>(85-121)</u>
D8-Toluene	<u>102</u>	<u>(86-119)</u>

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

SAMPLE IDENTIFIER: KWM16
COMPUCHEM SAMPLE NUMBER: 93025

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	43000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	BDL	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.060	0.020
LEAD	BDL	0.0050
MERCURY	0.052	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM16
 COMPUCHEM® SAMPLE NUMBER: 93024

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	100	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM16
 COMPUCHEM® SAMPLE NUMBER: 93023

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	BDL	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM16
 COMPUCHEM® SAMPLE NUMBER: 93023

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHthalate	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	5.0
35B. BUTYLBENZYLPHthalate	BDL	1.0
36B. 3,3'-DICHlorOBENZIDINE	BDL	2.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHthalate	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHthalate	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	43	(41-120)
2-Fluorobiphenyl	44	(44-119)
D ₁₄ -Terphenyl	41	(33-128)
D ₁₀ -Pyrene*	40	*

BDL=BELOW DETECTION LIMIT

B-98

*Advisory Surrogate; therefore no control range.

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM16
 COMPUCHEM® SAMPLE NUMBER: 93023

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	<u>40</u>	<u>(23-121)</u>
D ₅ -Phenol	<u>32</u>	<u>(15-103)</u>
2,4,6-Tribromophenol	<u>67</u>	<u>(10-130)</u>

BDL=BELOW DETECTION LIMIT

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM16
 COMPUCHEM SAMPLE NUMBER: 93022

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	6.0 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	% Recovery	Control Range%
D ₄ -1,2-Dichloroethane	89	(77-120)
4-Bromofluorobenzene	100	(85-121)
D ₈ -Toluene	101	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers
 *See Quality Assurance Notice

SAMPLE IDENTIFIER: KWM-17
COMPUCHEM SAMPLE NUMBER: 93021

	<u>CONCENTRATION</u> <u>(MG/L)</u>	<u>DETECTION LIMIT</u> <u>(MG/L)</u>
TOTAL DISSOLVED SOLIDS	33000	2.0
CYANIDE	BDL	0.30
ANTIMONY	BDL	0.20
ARSENIC	0.0070	0.0050
BERYLLIUM	BDL	0.010
CADMIUM	BDL	0.010
CHROMIUM	BDL	0.030
COPPER	0.050	0.020
LEAD	BDL	0.0050
MERCURY	0.075	0.00050
NICKEL	BDL	0.030
SELENIUM	BDL	0.0050
SILVER	BDL	0.050
THALLIUM	BDL	0.050
ZINC	BDL	0.010

BDL= BELOW DETECTION LIMITS

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: KWM-17
 COMPUCHEM® SAMPLE NUMBER: 93020

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1P. ALDRIN	BDL	0.10
2P. ALPHA-BHC	BDL	0.10
3P. BETA-BHC	BDL	0.10
4P. GAMMA-BHC	BDL	0.10
5P. DELTA-BHC	BDL	0.10
6P. CHLORDANE (TECHNICAL)	BDL	0.50
7P. 4,4'-DDT	BDL	0.10
8P. 4,4'-DDE	BDL	0.10
9P. 4,4'-DDD	BDL	0.10
10P. DIELDRIN	BDL	0.10
11P. ALPHA-ENDOSULFAN	BDL	0.10
12P. BETA-ENDOSULFAN	BDL	0.10
13P. ENDOSULFAN SULFATE	BDL	0.10
14P. ENDRIN	BDL	0.10
15P. ENDRIN ALDEHYDE	BDL	0.10
16P. HEPTACHLOR	BDL	0.10
17P. HEPTACHLOR EPOXIDE	BDL	0.10
18P. PCB-1242	BDL	1.0
19P. PCB-1254	BDL	1.0
20P. PCB-1221	BDL	1.0
21P. PCB-1232	BDL	1.0
22P. PCB-1248	BDL	1.0
23P. PCB-1260	BDL	1.0
24P. PCB-1016	BDL	1.0
25P. TOXAPHENE	BDL	1.0

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
Dibutylchloroendate	100	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-17
 COMPUCHEM® SAMPLE NUMBER: 93019

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. N-NITROSODIMETHYLAMINE	BDL	1.0
2B. BIS (2-CHLOROETHYL) ETHER	BDL	1.0
3B. 1,3-DICHLOROBENZENE	BDL	1.0
4B. 1,4-DICHLOROBENZENE	BDL	1.0
5B. 1,2-DICHLOROBENZENE	BDL	1.0
6B. BIS (2-CHLOROISOPROPYL) ETHER	BDL	1.0
7B. N-NITROSODI-N-PROPYLAMINE	BDL	1.0
8B. HEXACHLOROETHANE	BDL	1.0
9B. NITROBENZENE	BDL	1.0
10B. ISOPHORONE	BDL	1.0
11B. BIS(2-CHLOROETHOXY) METHANE	BDL	1.0
12B. 1,2,4-TRICHLOROBENZENE	BDL	1.0
13B. NAPHTHALENE	BDL	1.0
14B. HEXACHLOROBUTADIENE	BDL	1.0
15B. HEXACHLOROCYCLOPENTADIENE	BDL	1.0
16B. 2-CHLORONAPHTHALENE	BDL	1.0
17B. DIMETHYLPHTHALATE	BDL	1.0
18B. ACENAPHTHYLENE	BDL	1.0
19B. 2,6-DINITROTOLUENE	BDL	1.0
20B. ACENAPHTHENE	BDL	1.0
21B. 2,4-DINITROTOLUENE	BDL	1.0
22B. DIETHYLPHTHALATE	1.4	1.0
23B. 4-CHLOROPHENYL PHENYL ETHER	BDL	1.0
24B. FLUORENE	BDL	1.0
25B. DIPHENYLAMINE (N-NITROSO)	BDL	1.0
26B. 1,2-DIPHENYLHYDRAZINE (AZOBENZENE)	BDL	1.0
27B. 4-BROMOPHENYL PHENYL ETHER	BDL	1.0
28B. HEXACHLOROBENZENE	BDL	1.0

(Continued)

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

(Page Two)

SAMPLE IDENTIFIER: KWM-17
 COMPUCHEM® SAMPLE NUMBER: 93019

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
29B. PHENANTHRENE	BDL	1.0
30B. ANTHRACENE	BDL	1.0
31B. DI-N-BUTYLPHTHALATE	BDL	1.0
32B. FLUORANTHENE	BDL	1.0
33B. PYRENE	BDL	1.0
34B. BENZIDINE	BDL	1.0
35B. BUTYLBENZYLPHTHALATE	BDL	1.0
36B. 3,3'-DICHLOROBENZIDINE	BDL	1.0
37B. BENZO(A)ANTHRACENE	BDL	1.0
38B. BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1.0
39B. CHRYSENE	BDL	1.0
40B. DI-N-OCTYLPHTHALATE	BDL	1.0
41B. BENZO(B)FLUORANTHENE	BDL	1.0
42B. BENZO(K)FLUORANTHENE	BDL	1.0
43B. BENZO(A)PYRENE	BDL	1.0
44B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
45B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
46B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	35†	(41-120)
2-Fluorobiphenyl	33†	(44-119)
D ₁₄ -Terphenyl	27†	(33-128)
D ₁₀ -Pyrene*	36†	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†See Quality Assurance Notice

COMPOUND LIST -- ACID EXTRACTABLES

SAMPLE IDENTIFIER: KWM-17
 COMPUCHEM® SAMPLE NUMBER: 93019

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1A. PHENOL	BDL	1.0
2A. 2-CHLOROPHENOL	BDL	1.0
3A. 2-NITROPHENOL	BDL	1.0
4A. 2,4-DIMETHYLPHENOL	BDL	1.0
5A. 2,4-DICHLOROPHENOL	BDL	1.0
6A. P-CHLORO-M-CRESOL	BDL	1.0
7A. 2,4,6-TRICHLOROPHENOL	BDL	1.0
8A. 2,4-DINITROPHENOL	BDL	5.0
9A. 4-NITROPHENOL	BDL	5.0
10A. 4,6-DINITRO-O-CRESOL	BDL	5.0
11A. PENTACHLOROPHENOL	BDL	5.0

Surrogate Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
2-Fluorophenol	20*	(23-121)
D ₅ -Phenol	18	(15-103)
2,4,6-Tribromophenol	34	(10-130)

BDL= BELOW DETECTION LIMIT
 *See Quality Assurance Notice

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-17
 COMPUCHEM SAMPLE NUMBER: 93018

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	2.3 BG*	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	1.6	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	3.5	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	7.2	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	3.9	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	3.2	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	1.2	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p,-XYLENE†	2.6	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	72†	(77-120)
4-Bromofluorobenzene	100	(85-121)
D ₈ -Toluene	88	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

*See Quality Assurance Notice - #1

†See Quality Assurance Notice - #2

Section 5
(Site No. 9)

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: MW-2
 COMPUCEM® SAMPLE NUMBER: 93028

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1B. NAPHTHALENE	BDL	1.0
2B. 2-CHLORONAPHTHALENE	BDL	1.0
3B. ACENAPHTHYLENE	BDL	1.0
4B. ACENAPHTHENE	BDL	1.0
5B. FLUORENE	BDL	1.0
6B. PHENANTHRENE	BDL	1.0
7B. ANTHRACENE	BDL	1.0
8B. FLUORANTHENE	BDL	1.0
9B. PYRENE	BDL	1.0
10B. BENZO(A)ANTHRACENE	BDL	1.0
11B. CHRYSENE	BDL	1.0
12B. BENZO(B)FLUORANTHENE	BDL	1.0
13B. BENZO(K)FLUORANTHENE	BDL	1.0
14B. BENZO(A)PYRENE	BDL	1.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
17B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	85	(41-120)
2-Fluorobiphenyl	96	(44-119)
D ₁₄ -Terphenyl	48	(33-128)
D ₁₀ -Pyrene*	119	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

SAMPLE IDENTIFIER: MW-2
COMPUCHEM SAMPLE NUMBER: 93029

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	BDL	10
CHLOROBENZENE	BDL	10
1,2-DICHLOROBENZENE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
ETHYLBENZENE	BDL	10
TOLUENE	BDL	10
TOTAL XYLENES	BDL	10

	<u>CONCENTRATION (MG/L)</u>	<u>CONCENTRATION (MG/L)</u>
TOTAL DISSOLVED SOLIDS	840	2.0

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: MW-5
 COMPUCHEM® SAMPLE NUMBER: 93032

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1B. NAPHTHALENE	BDL	1.0
2B. 2-CHLORONAPHTHALENE	BDL	1.0
3B. ACENAPHTHYLENE	BDL	1.0
4B. ACENAPHTHENE	BDL	1.0
5B. FLUORENE	BDL	1.0
6B. PHENANTHRENE	BDL	1.0
7B. ANTHRACENE	BDL	1.0
8B. FLUORANTHENE	BDL	1.0
9B. PYRENE	BDL	1.0
10B. BENZO(A)ANTHRACENE	BDL	1.0
11B. CHRYSENE	BDL	1.0
12B. BENZO(B)FLUORANTHENE	BDL	1.0
13B. BENZO(K)FLUORANTHENE	BDL	1.0
14B. BENZO(A)PYRENE	BDL	1.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
17B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	54	(41-120)
2-Fluorobiphenyl	68	(44-119)
D ₁₄ -Terphenyl	35	(33-128)
D ₁₀ -Pyrene*	100	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

SAMPLE IDENTIFIER: MW-5
COMPUCHEM SAMPLE NUMBER: 93033

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	BDL	10
CHLOROBENZENE	BDL	10
1,2-DICHLOROBENZENE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
ETHYLBENZENE	BDL	10
TOLUENE	BDL	10
TOTAL XYLENES	BDL	10

	<u>CONCENTRATION (MG/L)</u>	<u>CONCENTRATION (MG/L)</u>
TOTAL DISSOLVED SOLIDS	910	2.0

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: MW-9
 COMPUCEM® SAMPLE NUMBER: 93030

	CONCENTRATION (UG/L)	DETECTION† LIMIT (UG/L)
1B. NAPHTHALENE	180	5.0
2B. 2-CHLORONAPHTHALENE	BDL	5.0
3B. ACENAPHTHYLENE	BDL	5.0
4B. ACENAPHTHENE	BDL	5.0
5B. FLUORENE	BDL	5.0
6B. PHENANTHRENE	BDL	5.0
7B. ANTHRACENE	BDL	5.0
8B. FLUORANTHENE	BDL	5.0
9B. PYRENE	BDL	5.0
10B. BENZO(A)ANTHRACENE	BDL	5.0
11B. CHRYSENE	BDL	5.0
12B. BENZO(B)FLUORANTHENE	BDL	5.0
13B. BENZO(K)FLUORANTHENE	BDL	5.0
14B. BENZO(A)PYRENE	BDL	5.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	5.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	5.0
17B. BENZO(G,H,I)PERYLENE	BDL	5.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	75	(41-120)
2-Fluorobiphenyl	80	(44-119)
D ₁₄ -Terphenyl	33	(33-128)
D ₁₀ -Pyrene*	86	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

†Sample analyzed using a 5:1 dilution, thus the higher than normal detection limits.

SAMPLE IDENTIFIER: MW-9
COMPUCHEM SAMPLE NUMBER: 93031

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	8000	100
CHLOROBENZENE	BDL	100
1,2-DICHLOROBENZENE	BDL	100
1,3-DICHLOROBENZENE	BDL	100
1,4-DICHLOROBENZENE	BDL	100
ETHYLBENZENE	2500	100
TOLUENE	BDL	100
TOTAL XYLENES	BDL	100

	<u>CONCENTRATION (MG/L)</u>	<u>CONCENTRATION (MG/L)</u>
TOTAL DISSOLVED SOLIDS	1200	2.0

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: MW-10
 COMPUCEM® SAMPLE NUMBER: 93026

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. NAPHTHALENE	BDL	1.0
2B. 2-CHLORONAPHTHALENE	BDL	1.0
3B. ACENAPHTHYLENE	BDL	1.0
4B. ACENAPHTHENE	BDL	1.0
5B. FLUORENE	BDL	1.0
6B. PHENANTHRENE	BDL	1.0
7B. ANTHRACENE	BDL	1.0
8B. FLUORANTHENE	BDL	1.0
9B. PYRENE	BDL	1.0
10B. BENZO(A)ANTHRACENE	BDL	1.0
11B. CHRYSENE	BDL	1.0
12B. BENZO(B)FLUORANTHENE	BDL	1.0
13B. BENZO(K)FLUORANTHENE	BDL	1.0
14B. BENZO(A)PYRENE	BDL	1.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
17B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	76	(41-120)
2-Fluorobiphenyl	89	(44-119)
D ₁₄ -Terphenyl	40	(33-128)
D ₁₀ -Pyrene*	123	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

SAMPLE IDENTIFIER: MW-10
COMPUCHEM SAMPLE NUMBER: 93027

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	BDL	10
CHLOROBENZENE	BDL	10
1,2-DICHLOROBENZENE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
ETHYLBENZENE	BDL	10
TOLUENE	BDL	10
TOTAL XYLENES	BDL	10

	<u>CONCENTRATION (MG/L)</u>	<u>CONCENTRATION (MG/L)</u>
TOTAL DISSOLVED SOLIDS	1200	2.0

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-20
 COMPUCHEM® SAMPLE NUMBER: 92859

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1B. NAPHTHALENE	BDL	1.0
2B. 2-CHLORONAPHTHALENE	BDL	1.0
3B. ACENAPHTHYLENE	BDL	1.0
4B. ACENAPHTHENE	BDL	1.0
5B. FLUORENE	BDL	1.0
6B. PHENANTHRENE	BDL	1.0
7B. ANTHRACENE	BDL	1.0
8B. FLUORANTHENE	BDL	1.0
9B. PYRENE	BDL	1.0
10B. BENZO(A)ANTHRACENE	BDL	1.0
11B. CHRYSENE	BDL	1.0
12B. BENZO(B)FLUORANTHENE	BDL	1.0
13B. BENZO(K)FLUORANTHENE	BDL	1.0
14B. BENZO(A)PYRENE	BDL	1.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
17B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	<u>73</u>	<u>(41-120)</u>
2-Fluorobiphenyl	<u>75</u>	<u>(44-119)</u>
D ₁₄ -Terphenyl	<u>48</u>	<u>(33-128)</u>
D ₁₀ -Pyrene*	<u>77</u>	<u>*</u>

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

SAMPLE IDENTIFIER: KWM-20
COMPUCHEM SAMPLE NUMBER: 92858

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	BDL	10
CHLOROBENZENE	BDL	10
1,2-DICHLOROBENZENE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
ETHYLBENZENE	BDL	10
TOLUENE	BDL	10
TOTAL XYLENES	BDL	10

	<u>CONCENTRATION (MG/L)</u>	<u>DETECTION LIMIT (MG/L)</u>
TOTAL DISSOLVED SOLIDS	2300	2.0

BDL= BELOW DETECTION LIMIT

COMPOUND LIST -- BASE-NEUTRAL EXTRACTABLES

SAMPLE IDENTIFIER: KWM-25
 COMPUCHEM® SAMPLE NUMBER: 92863

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1B. NAPHTHALENE	BDL	1.0
2B. 2-CHLORONAPHTHALENE	BDL	1.0
3B. ACENAPHTHYLENE	BDL	1.0
4B. ACENAPHTHENE	BDL	1.0
5B. FLUORENE	BDL	1.0
6B. PHENANTHRENE	BDL	1.0
7B. ANTHRACENE	BDL	1.0
8B. FLUORANTHENE	BDL	1.0
9B. PYRENE	BDL	1.0
10B. BENZO(A)ANTHRACENE	BDL	1.0
11B. CHRYSENE	BDL	1.0
12B. BENZO(B)FLUORANTHENE	BDL	1.0
13B. BENZO(K)FLUORANTHENE	BDL	1.0
14B. BENZO(A)PYRENE	BDL	1.0
15B. INDENO(1,2,3-C,D)PYRENE	BDL	1.0
16B. DIBENZO(A,H)ANTHRACENE	BDL	1.0
17B. BENZO(G,H,I)PERYLENE	BDL	1.0

Surrogates Recoveries - Introduced at the beginning of the extraction, surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>%Recovery</u>	<u>Control Range%</u>
D ₅ -Nitrobenzene	61	(41-120)
2-Fluorobiphenyl	62	(44-119)
D ₁₄ -Terphenyl	56	(33-128)
D ₁₀ -Pyrene*	79	*

BDL=BELOW DETECTION LIMIT

*Advisory Surrogate; therefore no control range

SAMPLE IDENTIFIER: KWM-25
COMPUCHEM SAMPLE NUMBER: 92862

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
BENZENE	BDL	10
CHLOROBENZENE	BDL	10
1,2-DICHLOROBENZENE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
ETHYLBENZENE	BDL	10
TOLUENE	BDL	10
TOTAL XYLENES	BDL	10

	<u>CONCENTRATION (MG/L)</u>	<u>(MG/L)</u>
TOTAL DISSOLVED SOLIDS	1100	2.0

BDL= BELOW DETECTION LIMIT

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Section 6
(Site No. 10)

SAMPLE IDENTIFIER: KWM-18
COMPUCHEM SAMPLE NUMBER: 92854

	<u>CONCENTRATION</u> <u>(MG/L)</u>	<u>DETECTION LIMIT</u> <u>(MG/L)</u>
TOTAL DISSOLVED SOLIDS	2200	2.0

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: KWM-18
 COMPUCEM® SAMPLE NUMBER: 92853

	<u>CONCENTRATION</u> (UG/L)	<u>DETECTION</u> <u>LIMIT</u> (UG/L)
1P. PCB-1242	BDL	0.10
2P. PCB-1254	BDL	0.10
3P. PCB-1221	BDL	0.10
4P. PCB-1232	BDL	0.10
5P. PCB-1248	BDL	0.10
6P. PCB-1260	BDL	0.10
7P. PCB-1016	BDL	0.10

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	87	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-18
 COMPUCHEM SAMPLE NUMBER: 92852

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
IV. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	5.0	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	87	(77-120)
4-Bromofluorobenzene	98	(85-121)
D ₈ -Toluene	108	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers

SAMPLE IDENTIFIER: KWM-19
COMPUCHEM SAMPLE NUMBER: 92857

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
TOTAL DISSOLVED SOLIDS	38000	2.0

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: KWM-19
 COMPUCHEM® SAMPLE NUMBER: 92856

	<u>CONCENTRATION (UG/L)</u>	<u>DETECTION LIMIT (UG/L)</u>
1P. PCB-1242	BDL	0.10
2P. PCB-1254	BDL	0.10
3P. PCB-1221	BDL	0.10
4P. PCB-1232	BDL	0.10
5P. PCB-1248	BDL	0.10
6P. PCB-1260	BDL	0.10
7P. PCB-1016	BDL	0.10

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	91	(48-136)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: KWM-19
 COMPUCHEM SAMPLE NUMBER: 92855

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.6	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p,-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	89	(77-120)
4-Bromofluorobenzene	95	(85-121)
D ₈ -Toluene	104	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers

Section 7
(Drilling Water)

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: TRIP BLANK
 COMPUCHEM SAMPLE NUMBER: 95490

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	4.4	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	BDL	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	BDL	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	BDL	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	BDL	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	BDL	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	86	(77-120)
4-Bromofluorobenzene	92	(85-121)
D ₈ -Toluene	106	(86-119)

BDL= BELOW DETECTION LIMIT
 †Indistinguishable Isomers

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: FK
 COMPUCHEM SAMPLE NUMBER: 95485

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	2.0	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	8.0	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	21	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	49	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	40	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROENZENE	BDL	1.0
29V. ETHYLBENZENE	0.6 J	1.0
30V. m,-XYLENE	0.8 J	1.0
31V. o,p-XYLENE†	0.6 J	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	<u>84</u>	<u>(77-120)</u>
4-Bromofluorobenzene	<u>95</u>	<u>(85-121)</u>
D ₈ -Toluene	<u>104</u>	<u>(86-119)</u>

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

J=Estimated concentration; values are between the detection limit and one-half of that limit.

COMPOUND LIST - VOLATILE ORGANICS

SAMPLE IDENTIFIER: TA
 COMPUCHEM SAMPLE NUMBER: 95484

	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)
1V. CHLOROMETHANE	BDL	1.0
2V. BROMOMETHANE	BDL	1.0
3V. VINYL CHLORIDE	BDL	1.0
4V. CHLOROETHANE	BDL	1.0
5V. METHYLENE CHLORIDE	0.8 J	1.0
6V. ACROLEIN	BDL	10
7V. ACRYLONITRILE	BDL	10
8V. 1,1-DICHLOROETHYLENE	BDL	1.0
9V. 1,1-DICHLOROETHANE	BDL	1.0
10V. TRANS-1,2-DICHLOROETHYLENE	BDL	1.0
11V. CHLOROFORM	8.7	1.0
12V. 1,2-DICHLOROETHANE	BDL	1.0
13V. 1,1,1-TRICHLOROETHANE	BDL	1.0
14V. CARBON TETRACHLORIDE	BDL	1.0
15V. BROMODICHLOROMETHANE	20	1.0
16V. 1,2-DICHLOROPROPANE	BDL	1.0
17V. TRANS-1,3-DICHLOROPROPENE	BDL	1.0
18V. TRICHLOROETHYLENE	BDL	1.0
19V. DIBROMOCHLOROMETHANE	41	1.0
20V. 1,1,2-TRICHLOROETHANE	BDL	1.0
21V. BENZENE	BDL	1.0
22V. CIS-1,3-DICHLOROPROPENE	BDL	1.0
23V. 2-CHLOROETHYL VINYL ETHER	BDL	1.0
24V. BROMOFORM	33	1.0
25V. 1,1,2,2-TETRACHLOROETHYLENE	BDL	1.0
26V. 1,1,2,2-TETRACHLOROETHANE	BDL	1.0
27V. TOLUENE	BDL	1.0
28V. CHLOROBENZENE	BDL	1.0
29V. ETHYLBENZENE	0.6 J	1.0
30V. m,-XYLENE	BDL	1.0
31V. o,p-XYLENE†	BDL	1.0

Surrogate Recoveries - Introduced at the instrument, volatile surrogate standards are deuterated and/or select compounds that analytically mimic the response of certain analytes. Known concentrations of these surrogates are added to the sample and a percent recovery is calculated. This recovery acts as a barometer of method efficiency for the individual sample.

	<u>% Recovery</u>	<u>Control Range%</u>
D ₄ -1,2-Dichloroethane	78	(77-120)
4-Bromofluorobenzene	96	(85-121)
D ₈ -Toluene	98	(86-119)

BDL= BELOW DETECTION LIMIT

†Indistinguishable Isomers

J=Estimated concentration; values are between the detection limit and one-half of that limit.

Geraghty & Miller, Inc.

APPENDIX C

Soil Sample Analyses

Section 1
(Site No. 2)

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P1-1
 COMPUCHEM® SAMPLE NUMBER: 91604

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	400
2P. PCB-1254	1800	400
3P. PCB-1221	BDL	400
4P. PCB-1232	BDL	400
5P. PCB-1248	BDL	400
6P. PCB-1260	BDL	400
7P. PCB-1016	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P1-2
 COMPUCHEM® SAMPLE NUMBER: 91603

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	85	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P1-3
 COMPUCEM® SAMPLE NUMBER: 91585

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	98	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P2-1
 COMPUCHEM® SAMPLE NUMBER: 91588

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	800
2P. PCB-1254	BDL	800
3P. PCB-1221	BDL	800
4P. PCB-1232	BDL	800
5P. PCB-1248	BDL	800
6P. PCB-1260	4200	800
7P. PCB-1016	BDL	800

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P2-2
 COMPUCHEM® SAMPLE NUMBER: 91589

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	56	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P2-3
 COMPUCHEM® SAMPLE NUMBER: 91590

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	63	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P3-1
 COMPUCEM® SAMPLE NUMBER: 91595

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION† LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	200
2P. PCB-1254	BDL	200
3P. PCB-1221	BDL	200
4P. PCB-1232	BDL	200
5P. PCB-1248	BDL	200
6P. PCB-1260	3000	200
7P. PCB-1016	BDL	200

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P3-2
 COMPUCHEM® SAMPLE NUMBER: 91596

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	81	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P3-3
 COMPUCEM® SAMPLE NUMBER: 91598

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	108	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P4-1
 COMPUCHEM® SAMPLE NUMBER: 91601

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. PCB-1242	BDL	80
2P. PCB-1254	308	80
3P. PCB-1221	BDL	80
4P. PCB-1232	BDL	80
5P. PCB-1248	BDL	80
6P. PCB-1260	BDL	80
7P. PCB-1016	BDL	80

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	29	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P4-2
 COMPUCHEM® SAMPLE NUMBER: 91591

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	93	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P4-3
 COMPUCEM® SAMPLE NUMBER: 91592

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	134	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P5-1
 COMPUCHEM® SAMPLE NUMBER: 91593

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION† LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	200
2P. PCB-1254	BDL	200
3P. PCB-1221	BDL	200
4P. PCB-1232	BDL	200
5P. PCB-1248	BDL	200
6P. PCB-1260	2000	200
7P. PCB-1016	BDL	200

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P5-2
 COMPUCHEM® SAMPLE NUMBER: 91594

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	61	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P5-3
 COMPUCEM® SAMPLE NUMBER: 91605

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION LIMIT (UG/KG)</u>
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	70	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	109	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P6-1
 COMPUCHEM® SAMPLE NUMBER: 91606

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	400
2P. PCB-1254	1500	400
3P. PCB-1221	BDL	400
4P. PCB-1232	BDL	400
5P. PCB-1248	BDL	400
6P. PCB-1260	BDL	400
7P. PCB-1016	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P6-2
 COMPUCHEM® SAMPLE NUMBER: 91607

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	73	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PCBs

SAMPLE IDENTIFIER: S2-P6-3
 COMPUCHEM® SAMPLE NUMBER: 91608

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. PCB-1242	BDL	20
2P. PCB-1254	BDL	20
3P. PCB-1221	BDL	20
4P. PCB-1232	BDL	20
5P. PCB-1248	BDL	20
6P. PCB-1260	BDL	20
7P. PCB-1016	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	119	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

Section 2
(Site No. 3)

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P1-1
 COMPUCHEM® SAMPLE NUMBER: 91577

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	8.0
2P. ALPHA-BHC	13	8.0
3P. BETA-BHC	56	8.0
4P. GAMMA-BHC	12	8.0
5P. DELTA-BHC	20	8.0
6P. CHLORDANE (TECHNICAL)	410	40
7P. 4,4'-DDT	260	8.0
8P. 4,4'-DDE	BDL	8.0
9P. 4,4'-DDD	440	8.0
10P. DIELDRIN	870	8.0
11P. ALPHA-ENDOSULFAN	BDL	8.0
12P. BETA-ENDOSULFAN	BDL	8.0
13P. ENDOSULFAN SULFATE	BDL	8.0
14P. ENDRIN	BDL	8.0
15P. ENDRIN ALDEHYDE	BDL	8.0
16P. HEPTACHLOR	BDL	8.0
17P. HEPTACHLOR EPOXIDE	BDL	8.0
18P. PCB-1242	BDL	80
19P. PCB-1254	BDL	80
20P. PCB-1221	BDL	80
21P. PCB-1232	BDL	80
22P. PCB-1248	BDL	80
23P. PCB-1260	BDL	80
24P. PCB-1016	BDL	80
25P. TOXAPHENE	BDL	80

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	36	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P1-2
 COMPUCHEM® SAMPLE NUMBER: 91580

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	40
2P. ALPHA-BHC	96	40
3P. BETA-BHC	BDL	40
4P. GAMMA-BHC	BDL	40
5P. DELTA-BHC	BDL	40
6P. CHLORDANE (TECHNICAL)	510	200
7P. 4,4'-DDT	300	40
8P. 4,4'-DDE	BDL	40
9P. 4,4'-DDD	730	40
10P. DIELDRIN	1400	40
11P. ALPHA-ENDOSULFAN	BDL	40
12P. BETA-ENDOSULFAN	BDL	40
13P. ENDOSULFAN SULFATE	BDL	40
14P. ENDRIN	BDL	40
15P. ENDRIN ALDEHYDE	BDL	40
16P. HEPTACHLOR	BDL	40
17P. HEPTACHLOR EPOXIDE	BDL	40
18P. PCB-1242	BDL	400
9P. PCB-1254	BDL	400
20P. PCB-1221	BDL	400
21P. PCB-1232	BDL	400
22P. PCB-1248	BDL	400
23P. PCB-1260	BDL	400
24P. PCB-1016	BDL	400
25P. TOXAPHENE	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

*Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P1-3
 COMPUCHEM® SAMPLE NUMBER: 91581

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	40
2P. ALPHA-BHC	BDL	40
3P. BETA-BHC	83	40
4P. GAMMA-BHC	BDL	40
5P. DELTA-BHC	BDL	40
6P. CHLORDANE (TECHNICAL)	530	200
7P. 4,4'-DDT	190	40
8P. 4,4'-DDE	BDL	40
9P. 4,4'-DDD	760	40
10P. DIELDRIN	1200	40
11P. ALPHA-ENDOSULFAN	BDL	40
12P. BETA-ENDOSULFAN	BDL	40
13P. ENDOSULFAN SULFATE	BDL	40
14P. ENDRIN	BDL	40
15P. ENDRIN ALDEHYDE	BDL	40
16P. HEPTACHLOR	BDL	40
17P. HEPTACHLOR EPOXIDE	BDL	40
18P. PCB-1242	BDL	400
19P. PCB-1254	BDL	400
20P. PCB-1221	BDL	400
21P. PCB-1232	BDL	400
22P. PCB-1248	BDL	400
23P. PCB-1260	BDL	400
24P. PCB-1016	BDL	400
25P. TOXAPHENE	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P2-1
 COMPUCHEM® SAMPLE NUMBER: 91582

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	400
2P. ALPHA-BHC	BDL	400
3P. BETA-BHC	2600	400
4P. GAMMA-BHC	BDL	400
5P. DELTA-BHC	BDL	400
6P. CHLORDANE (TECHNICAL)	4500	2000
7P. 4,4'-DDT	47000	400
8P. 4,4'-DDE	7200	400
9P. 4,4'-DDD	BDL	400
10P. DIELDRIN	BDL	400
11P. ALPHA-ENDOSULFAN	BDL	400
12P. BETA-ENDOSULFAN	BDL	400
13P. ENDOSULFAN SULFATE	BDL	400
14P. ENDRIN	BDL	400
15P. ENDRIN ALDEHYDE	BDL	400
16P. HEPTACHLOR	BDL	400
17P. HEPTACHLOR EPOXIDE	BDL	400
18P. PCB-1242	BDL	4000
19P. PCB-1254	BDL	4000
20P. PCB-1221	BDL	4000
21P. PCB-1232	BDL	4000
22P. PCB-1248	BDL	4000
23P. PCB-1260	BDL	4000
24P. PCB-1016	BDL	4000
25P. TOXAPHENE	BDL	4000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P2-2
 COMPUCHEM® SAMPLE NUMBER: 91565

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	8.0
2P. ALPHA-BHC	BDL	8.0
3P. BETA-BHC	9.1	8.0
4P. GAMMA-BHC	BDL	8.0
5P. DELTA-BHC	BDL	8.0
6P. CHLORDANE (TECHNICAL)	BDL	40
7P. 4,4'-DDT	760	8.0
8P. 4,4'-DDE	26	8.0
9P. 4,4'-DDD	60	8.0
10P. DIELDRIN	BDL	8.0
11P. ALPHA-ENDOSULFAN	BDL	8.0
12P. BETA-ENDOSULFAN	BDL	8.0
13P. ENDOSULFAN SULFATE	BDL	8.0
14P. ENDRIN	BDL	8.0
15P. ENDRIN ALDEHYDE	BDL	8.0
16P. HEPTACHLOR	BDL	8.0
17P. HEPTACHLOR EPOXIDE	BDL	8.0
18P. PCB-1242	BDL	80
19P. PCB-1254	BDL	80
20P. PCB-1221	BDL	80
21P. PCB-1232	BDL	80
22P. PCB-1248	BDL	80
23P. PCB-1260	BDL	80
24P. PCB-1016	BDL	80
25P. TOXAPHENE	BDL	80

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	71	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P2-3
 COMPUCHEM® SAMPLE NUMBER: 91568

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	6.4	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	35	2.0
8P. 4,4'-DDE	4.7	2.0
9P. 4,4'-DDD	4.5	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	58	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P3-1
 COMPUCHEM® SAMPLE NUMBER: 91563

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	40
2P. ALPHA-BHC	BDL	40
3P. BETA-BHC	200	40
4P. GAMMA-BHC	BDL	40
5P. DELTA-BHC	BDL	40
6P. CHLORDANE (TECHNICAL)	920	200
7P. 4,4'-DDT	4000	40
8P. 4,4'-DDE	2400	40
9P. 4,4'-DDD	200	40
10P. DIELDRIN	BDL	40
11P. ALPHA-ENDOSULFAN	BDL	40
12P. BETA-ENDOSULFAN	BDL	40
13P. ENDOSULFAN SULFATE	BDL	40
14P. ENDRIN	BDL	40
15P. ENDRIN ALDEHYDE	BDL	40
16P. HEPTACHLOR	BDL	40
17P. HEPTACHLOR EPOXIDE	BDL	40
18P. PCB-1242	BDL	400
19P. PCB-1254	BDL	400
20P. PCB-1221	BDL	400
21P. PCB-1232	BDL	400
22P. PCB-1248	BDL	400
23P. PCB-1260	BDL	400
24P. PCB-1016	BDL	400
25P. TOXAPHENE	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P3-2
 COMPUCHEM® SAMPLE NUMBER: 91564

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	4.9	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	50	2.0
8P. 4,4'-DDE	31	2.0
9P. 4,4'-DDD	7.5	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	58	20-150*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P3-3
 COMPUCHEM® SAMPLE NUMBER: 91569

	<u>CONCENTRATION (UG/KG)</u>	<u>DETECTION LIMIT (UG/KG)</u>
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	7.5	2.0
8P. 4,4'-DDE	5.3	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	54	20-150*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P4-1
 COMPUCHEM® SAMPLE NUMBER: 91570

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> LIMIT (UG/KG)
1P. ALDRIN	BDL	80
2P. ALPHA-BHC	BDL	80
3P. BETA-BHC	670	80
4P. GAMMA-BHC	BDL	80
5P. DELTA-BHC	BDL	80
6P. CHLORDANE (TECHNICAL)	BDL	400
7P. 4,4'-DDT	4500	80
8P. 4,4'-DDE	2600	80
9P. 4,4'-DDD	20000	80
10P. DIELDRIN	BDL	80
11P. ALPHA-ENDOSULFAN	BDL	80
12P. BETA-ENDOSULFAN	BDL	80
13P. ENDOSULFAN SULFATE	BDL	80
14P. ENDRIN	BDL	80
15P. ENDRIN ALDEHYDE	BDL	80
16P. HEPTACHLOR	BDL	80
17P. HEPTACHLOR EPOXIDE	BDL	80
18P. PCB-1242	BDL	800
19P. PCB-1254	BDL	800
20P. PCB-1221	BDL	800
21P. PCB-1232	BDL	800
22P. PCB-1248	BDL	800
23P. PCB-1260	BDL	800
24P. PCB-1016	BDL	800
25P. TOXAPHENE	BDL	800

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P4-2
 COMPUCHEM® SAMPLE NUMBER: 91571

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	20
2P. ALPHA-BHC	BDL	20
3P. BETA-BHC	22	20
4P. GAMMA-BHC	BDL	20
5P. DELTA-BHC	BDL	20
6P. CHLORDANE (TECHNICAL)	BDL	100
7P. 4,4'-DDT	58	20
8P. 4,4'-DDE	45	20
9P. 4,4'-DDD	1277	20
10P. DIELDRIN	BDL	20
11P. ALPHA-ENDOSULFAN	BDL	20
12P. BETA-ENDOSULFAN	BDL	20
13P. ENDOSULFAN SULFATE	BDL	20
14P. ENDRIN	BDL	20
15P. ENDRIN ALDEHYDE	BDL	20
16P. HEPTACHLOR	BDL	20
17P. HEPTACHLOR EPOXIDE	BDL	20
18P. PCB-1242	BDL	200
19P. PCB-1254	BDL	200
20P. PCB-1221	BDL	200
21P. PCB-1232	BDL	200
22P. PCB-1248	BDL	200
23P. PCB-1260	BDL	200
24P. PCB-1016	BDL	200
25P. TOXAPHENE	BDL	200

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P4-3
 COMPUCHEM® SAMPLE NUMBER: 91572

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	20
2P. ALPHA-BHC	BDL	20
3P. BETA-BHC	26	20
4P. GAMMA-BHC	BDL	20
5P. DELTA-BHC	BDL	20
6P. CHLORDANE (TECHNICAL)	BDL	100
7P. 4,4'-DDT	BDL	20
8P. 4,4'-DDE	34	20
9P. 4,4'-DDD	640	20
10P. DIELDRIN	BDL	20
11P. ALPHA-ENDOSULFAN	BDL	20
12P. BETA-ENDOSULFAN	BDL	20
13P. ENDOSULFAN SULFATE	BDL	20
14P. ENDRIN	BDL	20
15P. ENDRIN ALDEHYDE	BDL	20
16P. HEPTACHLOR	BDL	20
17P. HEPTACHLOR EPOXIDE	BDL	20
18P. PCB-1242	BDL	200
19P. PCB-1254	BDL	200
20P. PCB-1221	BDL	200
21P. PCB-1232	BDL	200
22P. PCB-1248	BDL	200
23P. PCB-1260	BDL	200
24P. PCB-1016	BDL	200
25P. TOXAPHENE	BDL	200

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P5-1
 COMPUCHEM® SAMPLE NUMBER: 91573

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	40
2P. ALPHA-BHC	BDL	40
3P. BETA-BHC	140	40
4P. GAMMA-BHC	BDL	40
5P. DELTA-BHC	BDL	40
6P. CHLORDANE (TECHNICAL)	BDL	200
7P. 4,4'-DDT	4600	40
8P. 4,4'-DDE	3200	40
9P. 4,4'-DDD	560	40
10P. DIELDRIN	BDL	40
11P. ALPHA-ENDOSULFAN	BDL	40
12P. BETA-ENDOSULFAN	BDL	40
13P. ENDOSULFAN SULFATE	BDL	40
14P. ENDRIN	BDL	40
15P. ENDRIN ALDEHYDE	BDL	40
16P. HEPTACHLOR	BDL	40
17P. HEPTACHLOR EPOXIDE	BDL	40
18P. PCB-1242	BDL	400
19P. PCB-1254	BDL	400
20P. PCB-1221	BDL	400
21P. PCB-1232	BDL	400
22P. PCB-1248	BDL	400
23P. PCB-1260	BDL	400
24P. PCB-1016	BDL	400
25P. TOXAPHENE	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P5-2
 COMPUCHEM® SAMPLE NUMBER: 91574

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	29	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	6.6	2.0
8P. 4,4'-DDE	4.0	2.0
9P. 4,4'-DDD	3.2	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	31	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P5-3
 COMPUCHEM® SAMPLE NUMBER: 91575

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	6.5	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	6.7	2.0
8P. 4,4'-DDE	9.3	2.0
9P. 4,4'-DDD	13.9	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	42	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P6-1
 COMPUCHEM® SAMPLE NUMBER: 91576

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	8.0
2P. ALPHA-BHC	BDL	8.0
3P. BETA-BHC	7.5	8.0
4P. GAMMA-BHC	BDL	8.0
5P. DELTA-BHC	BDL	8.0
6P. CHLORDANE (TECHNICAL)	BDL	40
7P. 4,4'-DDT	260	8.0
8P. 4,4'-DDE	350	8.0
9P. 4,4'-DDD	32	8.0
10P. DIELDRIN	BDL	8.0
11P. ALPHA-ENDOSULFAN	BDL	8.0
12P. BETA-ENDOSULFAN	BDL	8.0
13P. ENDOSULFAN SULFATE	BDL	8.0
14P. ENDRIN	BDL	8.0
15P. ENDRIN ALDEHYDE	BDL	8.0
16P. HEPTACHLOR	BDL	8.0
17P. HEPTACHLOR EPOXIDE	BDL	8.0
3P. PCB-1242	BDL	80
19P. PCB-1254	BDL	80
20P. PCB-1221	BDL	80
21P. PCB-1232	BDL	80
22P. PCB-1248	BDL	80
23P. PCB-1260	BDL	80
24P. PCB-1016	BDL	80
25P. TOXAPHENE	BDL	80

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	47	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P6-2
 COMPUCEM® SAMPLE NUMBER: 91583

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	4.0
2P. ALPHA-BHC	BDL	4.0
3P. BETA-BHC	BDL	4.0
4P. GAMMA-BHC	BDL	4.0
5P. DELTA-BHC	BDL	4.0
6P. CHLORDANE (TECHNICAL)	BDL	20
7P. 4,4'-DDT	BDL	4.0
8P. 4,4'-DDE	14	4.0
9P. 4,4'-DDD	BDL	4.0
10P. DIELDRIN	BDL	4.0
11P. ALPHA-ENDOSULFAN	BDL	4.0
12P. BETA-ENDOSULFAN	BDL	4.0
13P. ENDOSULFAN SULFATE	BDL	4.0
14P. ENDRIN	BDL	4.0
15P. ENDRIN ALDEHYDE	BDL	4.0
16P. HEPTACHLOR	BDL	4.0
17P. HEPTACHLOR EPOXIDE	BDL	4.0
18P. PCB-1242	BDL	40
19P. PCB-1254	BDL	40
20P. PCB-1221	BDL	40
21P. PCB-1232	BDL	40
22P. PCB-1248	BDL	40
23P. PCB-1260	BDL	40
24P. PCB-1016	BDL	40
25P. TOXAPHENE	BDL	40

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	63	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S3-P6-3
 COMPUCEM® SAMPLE NUMBER: 91584

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	5.0	2.0
8P. 4,4'-DDE	15	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	62	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

Section 3
(Site No. 4)

COMPOUND LIST - INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: S4-P2-1
COMPUCEM SAMPLE NUMBER: 92324

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. ARSENIC, TOTAL	BDL	0.050
2. BARIUM, TOTAL	BDL	1.0
3. CADMIUM, TOTAL	BDL	0.010
4. CHROMIUM, TOTAL	BDL	0.050
5. LEAD, TOTAL	BDL	0.050
6. MERCURY, TOTAL	BDL	0.00020
7. SELENIUM, TOTAL	BDL	0.010
8. SILVER, TOTAL	BDL	0.050

BDL = BELOW DETECTION LIMITS

COMPOUND LIST -- INORGANICS PRIORITY POLLUTANTS

SAMPLE IDENTIFIER: S4-P1-1
COMPUCHEM SAMPLE NUMBER: 92323

	<u>CONCENTRATION</u> (MG/L)	<u>DETECTION LIMIT</u> (MG/L)
1. ARSENIC, TOTAL	BDL	0.50
2. BARIUM, TOTAL	BDL	1.0
3. CADMIUM, TOTAL	BDL	0.010
4. CHROMIUM, TOTAL	BDL	0.050
5. LEAD, TOTAL	BDL	0.050
6. MERCURY, TOTAL	BDL	0.00020
7. SELENIUM, TOTAL	BDL	0.010
8. SILVER, TOTAL	BDL	0.050

BDL=BELOW DETECTION LIMIT

Section 4
(Site No. 5)

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P1-1
 COMPUCHEM® SAMPLE NUMBER: 92170

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	BDL	2.0
8P. 4,4'-DDE	BDL	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	78	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P1-2
 COMPUCHEM® SAMPLE NUMBER: 92171

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	BDL	2.0
8P. 4,4'-DDE	BDL	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	76	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P1-3
 COMPUCHEM® SAMPLE NUMBER: 92172

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	BDL	2.0
8P. 4,4'-DDE	BDL	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorodate	73	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P2-1
 COMPUCHEM® SAMPLE NUMBER: 92173

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	2.8	2.0
8P. 4,4'-DDE	2.6	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
4P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	88	20-150*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P2-2
 COMPUCHEM® SAMPLE NUMBER: 92176

	CONCENTRATION (UG/KG)	DETECTION LIMIT (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	BDL	2.0
8P. 4,4'-DDE	BDL	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	76	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis)

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P2-3
 COMPUCHEM® SAMPLE NUMBER: 92177

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	BDL	2.0
8P. 4,4'-DDE	BDL	2.0
9P. 4,4'-DDD	2.0	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	99	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P3-1
 COMPUCHEM® SAMPLE NUMBER: 92212

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	200
2P. ALPHA-BHC	BDL	200
3P. BETA-BHC	BDL	200
4P. GAMMA-BHC	BDL	200
5P. DELTA-BHC	290	200
6P. CHLORDANE (TECHNICAL)	BDL	1000
7P. 4,4'-DDT	1300	200
8P. 4,4'-DDE	1200	200
9P. 4,4'-DDD	4900	200
10P. DIELDRIN	BDL	200
11P. ALPHA-ENDOSULFAN	BDL	200
12P. BETA-ENDOSULFAN	BDL	200
13P. ENDOSULFAN SULFATE	BDL	200
14P. ENDRIN	BDL	200
15P. ENDRIN ALDEHYDE	BDL	200
16P. HEPTACHLOR	BDL	200
17P. HEPTACHLOR EPOXIDE	BDL	200
18P. PCB-1242	BDL	2000
19P. PCB-1254	BDL	2000
20P. PCB-1221	BDL	2000
21P. PCB-1232	BDL	2000
22P. PCB-1248	BDL	2000
23P. PCB-1260	BDL	2000
24P. PCB-1016	BDL	2000
25P. TOXAPHENE	BDL	2000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P3-2
 COMPUCHEM® SAMPLE NUMBER: 92178

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	200
2P. ALPHA-BHC	120	200
3P. BETA-BHC	BDL	200
4P. GAMMA-BHC	BDL	200
5P. DELTA-BHC	220	200
6P. CHLORDANE (TECHNICAL)	BDL	1000
7P. 4,4'-DDT	590	200
8P. 4,4'-DDE	BDL	200
9P. 4,4'-DDD	4400	200
10P. DIELDRIN	BDL	200
11P. ALPHA-ENDOSULFAN	BDL	200
12P. BETA-ENDOSULFAN	BDL	200
13P. ENDOSULFAN SULFATE	BDL	200
14P. ENDRIN	BDL	200
15P. ENDRIN ALDEHYDE	BDL	200
16P. HEPTACHLOR	BDL	200
17P. HEPTACHLOR EPOXIDE	BDL	200
18P. PCB-1242	BDL	2000
19P. PCB-1254	BDL	2000
20P. PCB-1221	BDL	2000
21P. PCB-1232	BDL	2000
22P. PCB-1248	BDL	2000
23P. PCB-1260	BDL	2000
24P. PCB-1016	BDL	2000
25P. TOXAPHENE	BDL	2000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P3-3
 COMPUCHEM® SAMPLE NUMBER: 92183

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	80
2P. ALPHA-BHC	BDL	80
3P. BETA-BHC	BDL	80
4P. GAMMA-BHC	BDL	80
5P. DELTA-BHC	150	80
6P. CHLORDANE (TECHNICAL)	BDL	400
7P. 4,4'-DDT	220	80
8P. 4,4'-DDE	120	80
9P. 4,4'-DDD	2400	80
10P. DIELDRIN	BDL	80
11P. ALPHA-ENDOSULFAN	BDL	80
12P. BETA-ENDOSULFAN	BDL	80
13P. ENDOSULFAN SULFATE	BDL	80
14P. ENDRIN	BDL	80
15P. ENDRIN ALDEHYDE	BDL	80
16P. HEPTACHLOR	BDL	80
17P. HEPTACHLOR EPOXIDE	BDL	80
18P. PCB-1242	BDL	8000
19P. PCB-1254	BDL	8000
20P. PCB-1221	BDL	8000
21P. PCB-1232	BDL	8000
22P. PCB-1248	BDL	8000
23P. PCB-1260	BDL	8000
24P. PCB-1016	BDL	8000
25P. TOXAPHENE	BDL	8000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P4-1
 COMPUCHEM® SAMPLE NUMBER: 92184

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	40
2P. ALPHA-BHC	BDL	40
3P. BETA-BHC	BDL	40
4P. GAMMA-BHC	BDL	40
5P. DELTA-BHC	BDL	40
6P. CHLORDANE (TECHNICAL)	BDL	200
7P. 4,4'-DDT	2500	40
8P. 4,4'-DDE	167	40
9P. 4,4'-DDD	BDL	40
10P. DIELDRIN	BDL	40
11P. ALPHA-ENDOSULFAN	BDL	40
12P. BETA-ENDOSULFAN	BDL	40
13P. ENDOSULFAN SULFATE	BDL	40
14P. ENDRIN	BDL	40
15P. ENDRIN ALDEHYDE	BDL	40
16P. HEPTACHLOR	BDL	40
17P. HEPTACHLOR EPOXIDE	BDL	40
18P. PCB-1242	BDL	400
19P. PCB-1254	BDL	400
20P. PCB-1221	BDL	400
21P. PCB-1232	BDL	400
22P. PCB-1248	BDL	400
23P. PCB-1260	BDL	400
24P. PCB-1016	BDL	400
25P. TOXAPHENE	BDL	400

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P4-2
 COMPUCHEM® SAMPLE NUMBER: 92188

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	2.0
2P. ALPHA-BHC	BDL	2.0
3P. BETA-BHC	BDL	2.0
4P. GAMMA-BHC	BDL	2.0
5P. DELTA-BHC	BDL	2.0
6P. CHLORDANE (TECHNICAL)	BDL	10
7P. 4,4'-DDT	89	2.0
8P. 4,4'-DDE	5.3	2.0
9P. 4,4'-DDD	BDL	2.0
10P. DIELDRIN	BDL	2.0
11P. ALPHA-ENDOSULFAN	BDL	2.0
12P. BETA-ENDOSULFAN	BDL	2.0
13P. ENDOSULFAN SULFATE	BDL	2.0
14P. ENDRIN	BDL	2.0
15P. ENDRIN ALDEHYDE	BDL	2.0
16P. HEPTACHLOR	BDL	2.0
17P. HEPTACHLOR EPOXIDE	BDL	2.0
18P. PCB-1242	BDL	20
19P. PCB-1254	BDL	20
20P. PCB-1221	BDL	20
21P. PCB-1232	BDL	20
22P. PCB-1248	BDL	20
23P. PCB-1260	BDL	20
24P. PCB-1016	BDL	20
25P. TOXAPHENE	BDL	20

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	101	20-150*

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

BDL=BELOW DETECTION LIMIT

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P4-3
 COMPUCHEM® SAMPLE NUMBER: 92195

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	200
2P. ALPHA-BHC	BDL	200
3P. BETA-BHC	BDL	200
4P. GAMMA-BHC	BDL	200
5P. DELTA-BHC	BDL	200
6P. CHLORDANE (TECHNICAL)	BDL	1000
7P. 4,4'-DDT	2500	200
8P. 4,4'-DDE	300	200
9P. 4,4'-DDD	BDL	200
10P. DIELDRIN	BDL	200
11P. ALPHA-ENDOSULFAN	BDL	200
12P. BETA-ENDOSULFAN	BDL	200
13P. ENDOSULFAN SULFATE	BDL	200
14P. ENDRIN	BDL	200
15P. ENDRIN ALDEHYDE	BDL	200
16P. HEPTACHLOR	BDL	200
17P. HEPTACHLOR EPOXIDE	BDL	200
18P. PCB-1242	BDL	2000
19P. PCB-1254	BDL	2000
20P. PCB-1221	BDL	2000
21P. PCB-1232	BDL	2000
22P. PCB-1248	BDL	2000
23P. PCB-1260	BDL	2000
24P. PCB-1016	BDL	2000
25P. TOXAPHENE	BDL	2000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P5-1
 COMPUCHEM® SAMPLE NUMBER: 92179

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	2000
2P. ALPHA-BHC	23000	2000
3P. BETA-BHC	4700	2000
4P. GAMMA-BHC	25000	2000
5P. DELTA-BHC	27000	2000
6P. CHLORDANE (TECHNICAL)	BDL	10000
7P. 4,4'-DDT	135000	2000
8P. 4,4'-DDE	41000	2000
9P. 4,4'-DDD	760000	2000
10P. DIELDRIN	BDL	2000
11P. ALPHA-ENDOSULFAN	BDL	2000
12P. BETA-ENDOSULFAN	BDL	2000
13P. ENDOSULFAN SULFATE	BDL	2000
14P. ENDRIN	BDL	2000
15P. ENDRIN ALDEHYDE	BDL	2000
16P. HEPTACHLOR	BDL	2000
17P. HEPTACHLOR EPOXIDE	BDL	2000
18P. PCB-1242	BDL	20000
19P. PCB-1254	BDL	20000
20P. PCB-1221	BDL	20000
21P. PCB-1232	BDL	20000
22P. PCB-1248	BDL	20000
23P. PCB-1260	BDL	20000
24P. PCB-1016	BDL	20000
25P. TOXAPHENE	BDL	20000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P5-2
 COMPUCEM® SAMPLE NUMBER: 92180

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	800
2P. ALPHA-BHC	1600	800
3P. BETA-BHC	BDL	800
4P. GAMMA-BHC	BDL	800
5P. DELTA-BHC	1900	800
6P. CHLORDANE (TECHNICAL)	BDL	40000
7P. 4,4'-DDT	38000	800
8P. 4,4'-DDE	BDL	800
9P. 4,4'-DDD	43000	800
10P. DIELDRIN	BDL	800
11P. ALPHA-ENDOSULFAN	BDL	800
12P. BETA-ENDOSULFAN	BDL	800
13P. ENDOSULFAN SULFATE	BDL	800
14P. ENDRIN	BDL	800
15P. ENDRIN ALDEHYDE	BDL	800
16P. HEPTACHLOR	BDL	800
17P. HEPTACHLOR EPOXIDE	BDL	800
18P. PCB-1242	BDL	8000
9P. PCB-1254	BDL	8000
20P. PCB-1221	BDL	8000
21P. PCB-1232	BDL	8000
22P. PCB-1248	BDL	8000
23P. PCB-1260	BDL	8000
24P. PCB-1016	BDL	8000
25P. TOXAPHENE	BDL	8000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorodate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P5-3
 COMPUCHEM® SAMPLE NUMBER: 92181

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	4000
2P. ALPHA-BHC	BDL	4000
3P. BETA-BHC	BDL	4000
4P. GAMMA-BHC	BDL	4000
5P. DELTA-BHC	BDL	4000
6P. CHLORDANE (TECHNICAL)	BDL	20000
7P. 4,4'-DDT	55000	4000
8P. 4,4'-DDE	BDL	4000
9P. 4,4'-DDD	40000	4000
10P. DIELDRIN	BDL	4000
11P. ALPHA-ENDOSULFAN	BDL	4000
12P. BETA-ENDOSULFAN	BDL	4000
13P. ENDOSULFAN SULFATE	BDL	4000
14P. ENDRIN	BDL	4000
15P. ENDRIN ALDEHYDE	BDL	4000
16P. HEPTACHLOR	BDL	4000
17P. HEPTACHLOR EPOXIDE	BDL	4000
18P. PCB-1242	BDL	40000
19P. PCB-1254	BDL	40000
PCB-1221	BDL	40000
PCB-1232	BDL	40000
22P. PCB-1248	BDL	40000
23P. PCB-1260	BDL	40000
24P. PCB-1016	BDL	40000
25P. TOXAPHENE	BDL	40000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchlorendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P6-1
 COMPUCHEM® SAMPLE NUMBER: 92182

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	200
2P. ALPHA-BHC	BDL	200
3P. BETA-BHC	BDL	200
4P. GAMMA-BHC	BDL	200
5P. DELTA-BHC	BDL	200
6P. CHLORDANE (TECHNICAL)	BDL	1000
7P. 4,4'-DDT	7800	200
8P. 4,4'-DDE	1100	200
9P. 4,4'-DDD	BDL	200
10P. DIELDRIN	BDL	200
11P. ALPHA-ENDOSULFAN	BDL	200
12P. BETA-ENDOSULFAN	BDL	200
13P. ENDOSULFAN SULFATE	BDL	200
14P. ENDRIN	BDL	200
15P. ENDRIN ALDEHYDE	BDL	200
16P. HEPTACHLOR	BDL	200
17P. HEPTACHLOR EPOXIDE	BDL	200
18P. PCB-1242	BDL	2000
19P. PCB-1254	BDL	2000
20P. PCB-1221	BDL	2000
21P. PCB-1232	BDL	2000
22P. PCB-1248	BDL	2000
23P. PCB-1260	BDL	2000
24P. PCB-1016	BDL	2000
25P. TOXAPHENE	BDL	2000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P6-2
 COMPUCHEM® SAMPLE NUMBER: 92325

	<u>CONCENTRATION</u> (UG/KG)	<u>DETECTION†</u> <u>LIMIT</u> (UG/KG)
1P. ALDRIN	BDL	80
2P. ALPHA-BHC	BDL	80
3P. BETA-BHC	BDL	80
4P. GAMMA-BHC	BDL	80
5P. DELTA-BHC	BDL	80
6P. CHLORDANE (TECHNICAL)	BDL	400
7P. 4,4'-DDT	550	80
8P. 4,4'-DDE	BDL	80
9P. 4,4'-DDD	210	80
10P. DIELDRIN	BDL	80
11P. ALPHA-ENDOSULFAN	BDL	80
12P. BETA-ENDOSULFAN	BDL	80
13P. ENDOSULFAN SULFATE	BDL	80
14P. ENDRIN	BDL	80
15P. ENDRIN ALDEHYDE	BDL	80
16P. HEPTACHLOR	BDL	80
17P. HEPTACHLOR EPOXIDE	BDL	80
18P. PCB-1242	BDL	800
19P. PCB-1254	BDL	800
20P. PCB-1221	BDL	800
21P. PCB-1232	BDL	800
22P. PCB-1248	BDL	800
23P. PCB-1260	BDL	800
24P. PCB-1016	BDL	800
25P. TOXAPHENE	BDL	800

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	**	(20-150)*

BDL=BELOW DETECTION LIMIT

*Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

**No surrogate recovery data available due to a dilution and/or matrix interference.

COMPOUND LIST -- PESTICIDES/PCBs

SAMPLE IDENTIFIER: S5-P6-3
 COMPUCHEM® SAMPLE NUMBER: 92326.

	CONCENTRATION (UG/KG)	DETECTION† LIMIT (UG/KG)
1P. ALDRIN	BDL	200
2P. ALPHA-BHC	BDL	200
3P. BETA-BHC	BDL	200
4P. GAMMA-BHC	BDL	200
5P. DELTA-BHC	BDL	200
6P. CHLORDANE (TECHNICAL)	BDL	1000
7P. 4,4'-DDT	2300	200
8P. 4,4'-DDE	BDL	200
9P. 4,4'-DDD	600	200
10P. DIELDRIN	BDL	200
11P. ALPHA-ENDOSULFAN	BDL	200
12P. BETA-ENDOSULFAN	BDL	200
13P. ENDOSULFAN SULFATE	BDL	200
14P. ENDRIN	BDL	200
15P. ENDRIN ALDEHYDE	BDL	200
16P. HEPTACHLOR	BDL	200
17P. HEPTACHLOR EPOXIDE	BDL	200
18P. PCB-1242	BDL	2000
19P. PCB-1254	BDL	2000
20P. PCB-1221	BDL	2000
21P. PCB-1232	BDL	2000
22P. PCB-1248	BDL	2000
23P. PCB-1260	BDL	2000
24P. PCB-1016	BDL	2000
25P. TOXAPHENE	BDL	2000

Surrogate Recovery - Introduced at the beginning of the extraction, the surrogate standard is a select compound that analytically mimics the response of certain analytes. A known concentration of this surrogate is added to the sample and a percent recovery is calculated. This recovery acts as a barometer of extraction efficiency and analytical response for the individual sample.

	<u>% Recovery</u>	<u>Control Range %</u>
Dibutylchloroendate	*	20-150**

BDL=BELOW DETECTION LIMIT

†Sample analyzed using a dilution to properly evaluate the GC Chromatogram, thus the higher than normal detection limits.

*No surrogate recovery data available due to a dilution and/or matrix interference.

**Advisory surrogate; with the exception of dilutions recovery below 10% requires action step (re-extraction and re-analysis).

Geraghty & Miller, Inc.

APPENDIX D

Ambient Water-Quality Criteria
taken from the Federal Register,
November 28, 1980

a = acute toxicity
 b = chronic toxicity
 c = 24 hour average
 d = at any time

e = criterion for consumption
 of aquatic organisms only
 f = criterion for consumption of
 water and aquatic organisms
 g = using organoleptic data
 h = based on available toxicity data

All concentrations in ug/l (=ppb) except where stated.
 ng/l = nanogram/l (=ppt)

Compound	Salt Water	Fresh Water	Human Health
Acenaphthene	970a 710b	1700a	20g
Acrolein	55a	68a 21b	780e 320f
Acrylonitrile	insufficient data	7550a	.58, .058, .006f, 6.5, .65, .065 e
Dieldrin	.0019c .71d	.0019c 2.5d	.71 ng/l, .071 ng/l, .0071f ng .76 ng/l, .076 ng/l, .0076e ng
Aldrin	1.3d	3.0d	.74 ng/l, .074 ng/l, .0071f ng .79 ng/l, .079 ng/l, .0079e ng
Antimony	insufficient data	9000a 1600b	146f 45,000e
Arsenic	508a	440d	22 ng/l, 2.2 ng/l, .22f ng/l, 175 ng/l, 17.5 ng/l, 1.75e ng/l
Asbestos	insufficient data	insufficient data	300,000 fibers/l 30,000 fibers/l 3,000 fibers/l e
Benzene	5100a	5300a	6.6, .66, .066f, 4.0, 400, 40.0e
Beryllium	insufficient data	130a 5.3b	37 ng/l, 3.7 ng/l, .37f ng/l f 641. ng/l, 64.1 ng/l, 6.41e ng.
Benzidine	insufficient data	2500a	1.2 ng/l, .12 ng/l, .01 ng/l f 5.3 ng/l, .53 ng/l, .05 ng/l e
Cadmium	4.5c 59d	e (1.05 (in(hardness)) -8.53)c e (1.05(in (hardness)) -3.73)d	10h (identical to drinking water standard)
Carbon Tetra- chloride	50,000a	35,200a	4.0, .40, .04 f
Chlordane	.0040c .09d	.0043c 2.4d	4.6 ng/l, .46 ng/l, .046 ng/l 4.8 ng/l, .48 ng/l, .048 ng/l

<u>Compound</u>	<u>Salt Water</u>	<u>Fresh Water</u>	<u>Human Health</u>
Chlorinated Benzenes	160a 129b	250a	7.2 ng/l, .72 ng/l, .072 ng/l 7.4 ng/l, .74 ng/l, .074 ng/l for hexachlorobenzene; 38a 48a for 1,2,4,5 - tetrachlorobenzene; 74a 85 a for pentachlorobenzene; 20g, 488d for chlorobenzene
Chlorinated Ethanes	113,000 for 1,2-Dichloroethane; 31,200a for 1,1,1-Trichloroethane; 9,020a for 1,1,2,2-Tetrachloroethane; 390a 281b for pentachloroethane	118,000a 20,000b for 1,2-Dichloroethane; 18,000a for 1,1,1-Trichloroethane, 18,000a 9,400b for 1,1,2-Trichloroethane; 9,320a 2,400b for 1,1,2,2-Tetrachloroethane; 7,240a 1,100b for pentachloroethane; 980a 540b for hexachloroethane	9,4, .94, .094f, 24.3e 2,430, 243 for 1,2-Dichloroethane; 18,400e 1,030,000f for 1,1,1-Trichloroethane; 6,0, .6, .06f, 418, 41.8, 4,18e for 1,1,2-Trichloroethane; 1,7, .17, .017f, 107, 10.7, 1, 107, 10.7, 1.07e for 1,1,2,2-Tetrachloroethane; 19, 1.9, .1, 87.4, 8.74, .87e for hexachloroethane
Chlorinated Naphthalenes	7.5a	1,600a	insufficient data
Chlorinated Phenols	440a for 2,3,5,6-tetrachlorophenol; 29,700a for 4-chlorophenol	30a for 4-chloro-3-methylphenol; 970b for 2,4,6-trichlorophenol	.1g for 3-chlorophenol; .1g for 4-chlorophenol; .04g for 2,3-dichlorophenol; .5g for 2,5-dichlorophenol; .2g for 2,6-dichlorophenol .3g for 3,4-dichlorophenol; 1g for 2,3,4,6-tetrachlorophenol; 2,600h 1.0g for 2,4,5-trichlorophenol; 12,1.2, .12f 36,3.6, .36e 2g for 2,4,6-trichlorophenol; 1800g for 2-methyl-4-chlorophenol; 3000g for 3-methyl-4-chlorophenol; 20g for 3-methyl-6-chlorophenol

<u>Compound</u>	<u>Salt Water</u>	<u>Fresh Water</u>	<u>Human Health</u>
Chloroalkyl ethers	Insufficient data	238,000a for all chloroalkyl ethers	.038 ng/l, .0038 ng/l, .00038f ng/l, 18.4 ng/l, 1.84 ng/l, .184 ng/l e for bis-(chloromethyl)-ether; .3, .03, .003f, 13,6, 1.36, .136e for bis-(2-chloroethyl) ether; 34.7f 4360e for bis-(2-chloroisopropyl) ether
Chloroform	Insufficient data	28,900a 1240b	1.90, .19, .019f 157, 15.7, 1.57e
2-Chlorophenol	Insufficient data	4380a	.1g
Chromium (trivalent)	10,300b	e(1.08(in(hardness)) +3.48)d	170,000f 3,433,000e
Chromium (hexavalent)	18c 1260d	.29c 21d	50 h
Copper	4.0c 23d	5.6c e(.94 (in (hardness)) -1.23)d	1000g
Cyanide (sum of HCN and CN ⁻)	30a 2.0b	3.5c 52d	200h (identical to dw standard)
DDT + metabolites	.0010e .13d	.0010c 1.1d	.24 ng/l, .024 ng/l, .0024 ng/l .24 ng/l, .024 ng/l, .0024 ng/l
TDE	3.6a	.6a	insufficient data
DDE	14a	1050a	insufficient data
Dichlorobenzenes	1,970a	1,120a 763b	400f 2600e
Dichlorobenzenes	Insufficient data	Insufficient data	.103, .0103, .00103f .204, .0204; .00204e
Dichloroethylenes	224,000a	11,600a	.33, .033, .0033f, 18.5, 1.85, .185 e for 1,1-dichloroethylene
2,4-Dichlorophenol	Insufficient data	2,202a 365b	3090h .3g
Dichloropropanes	10,300a 3040b	23,000a 5700b	Insufficient data
Dichloropropenes	790a	6,060a 244b	87f 14,100e
2,4-Dinitrotoluene	590a	330a 230b	1.1, .11, .011f 91, 9.1, .91e

<u>Compound</u>	<u>Salt Water</u>		<u>Fresh Water</u>		<u>Human Health</u>	
2-Diphenyl- irazine	Insufficient data		270a		422 ng/l, 42 ng/l, 4 ng/l f 5.6, .56, .056 e	
Endosulfan	.0087c	.034d	.056c	.22d	74f	159e
Endrin	.0023c	.037d	.0023c	.18d	1h (identical to dw standard)	
Ethyl benzene	430a		32,000a		1400f	3280e
Fluoranthene	40a	16b	3980a		42f	54e
Haloethers	Insufficient data		.360a	122b	Insufficient data	
Halomethanes	12,000a	6400b	11,000a		1.9, .19, .019f 157, 15.7, 1.57e for the following: chloromethane bromomethane dichloromethane bromodichloromethane tribromomethane dichlorodifluoromethane trichlorofluoromethane	
Heptachlor	.0036c	.053d	.0038c	.52d	2.78 ng/l, .28 ng/l, .028 ng/l 2.85 ng/l, .29 ng/l, .029 ng/l	
Hexachloro- butadiene	32a		90a	9.3b	4.47, .45, .045 f 500, 50, 5 e	
Hexachloro- cyclohexane: Lindane (gamma HCH)	.16d		.080c	2.0d	186 ng/l, 18.6 ng/l, 1.86 ng/l 625 ng/l, 62.5 ng/l, 6.25 ng/l	
BHC (mixture of isomers)	.34a		100a		-	
alpha-HCH					92 ng/l, 9.2 ng/l, .92 ng/l f 310 ng/l, 31.0 ng/l, 3.1 ng/l	
beta-HCH					163 ng/l, 16.3 ng/l, 1.63 ng/l	
tech-HCH					547 ng/l, 54.7 ng/l, 5.47 ng/l 123 ng/l, 12.3 ng/l, 1.23 ng/l 414 ng/l, 41.4 ng/l, 4.14 ng/l	
Hexachloro- cyclopenta- diene	7.0a		7.0a	5.2b	206h	1.0g
Isophorone	12,900a		117,000a		5,200f	520,000e
Lead	668a	25b	e(2.35 (ln(hardness)) -9.48)c e(1.22 (ln (hardness)) -.47)d		50h (identical to dw standard)	

Compound	Salt Water		Fresh Water		Human Health	
Mercury	.025c	3.7d	.0057c	.0017d	144 ng/l f	146 ng/l e
phthalene	2350a		2,300a	620b	Insufficient data	
Nickel	7.1c	140d	e(.76 (ln(hardness)) +1.06)c e(.76(ln(hardness)) +4.02)d		13.4f	100e
Nitro benzene	6,680a		27,000a		19,800h	30g
Nitrophenols	4,850a		230a		13.4f	765e for 2,4-dinitro-o-cresol; 70f 14,300e for dinitrophenol
Nitrosamines	3,300,000a		5,850a		14 ng/l, 1.4 ng/l, .14 ng/l f 160, 16, 1.6 e for n-nitrosodimethylamine; 8 ng/l, .8 ng/l, .08 ng/l f 12.4, 1.24, .124 e for n-nitrosodiethylamine; 64 ng/l, 6.4 ng/l, .064 ng/l f 5.868, .587, .0587 g for n-nitrosodi- n-butylamine; 49.0, 4.90, .49 f 161, 16.1, 1.61 e for n-nitrosodiphenylamine 160 ng/l, 16.0 ng/l, 1.60 ng/l 919, 91.9, 9.19 e for n-nitrosopyrrolidine	
Pentachloro-phenol	53a	34b	55a	3.2b	1,010h	30g
Phenol	5800a		10,200a	2560b	3,500h	300g
Phthalate Esters	2944a	3.4b	940a	3b	313,000f 2,900,000c for dimethyl phthalate; 350,000f 1,800,000e for diethyl phthalate; 34,000f 154,000e for dibutyl phthalate; 15,000f 50,000e for di-2-ethylhexyl phthalate	
PCB's	.030c		.014c		.79 ng/l, .079 ng/l, .0079 ng, .79 ng/l, .079 ng/l, .0079 ng,	
Polynuclear Aromatic hydrocarbons	300a		Insufficient data		28 ng/l, 2.8 ng/l, .28 ng/l 311 ng/l, 31.1 ng/l, 3.11 ng/l	

<u>Compound</u>	<u>Salt Water</u>	<u>Fresh Water</u>	<u>Human Health</u>
Selenium	54c 410d	35c 260d 760a	10f (identical to dw standard)
Silver	2.3d	e (1.72 (ln (hardness))-6.52) d	50f (identical to dw standard)
Tetrachloro-ethylene	10,200a 450b	5,280a 840b	8, .8, .08 f 88.5, 8.85, .88 e
Thallium	2130a	1400a 40b	13f 48e
Toluene	6,300a 5000b	17,500a	14,300f 424,000e
Toxaphene	.07d	.013c 1.6f	7.1 ng/l, .71 ng/l, .07 ng/l f 7.3 ng/l, .73 ng/l, .07 ng/l e
Trichloro-ethylene	2000a	45,000a	27, 2.7, .27 f 807, 80.7, 8.07 e
Vinyl chloride	Insufficient data	Insufficient data	20, 2.0, .2 f 5.246, .525, 52.5 e
Zinc	58c 170d	47c e (.83 (ln (hardness))+1.95) d	5000 g