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ENVIRONMENTAL EVALUATION REPORT APPENDICES A THROUGH D

Four County Landfill
Fulton County, Indiana

Prepared for:
The Four County Landfill Group

PRINTED ON

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OCTOBER 1994
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CONESTOGA-ROVERS & ASSOCIATES

APPENDIX A

LANDSCAPE ENVIRONMENTAL EVALUATION FOR THE FOUR COUNTY LANDFILL SITE

PREPARED BY CHRISTOPHER B. BURKE ENGINEERING, LTD. (CBBEL)

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (708) 823-0500 FAX (708) 823-0520

July 26, 1994
Revised September 30, 1994

Conestoga-Rovers and Associates
O'Hare Corporate Towers One
10400 West Higgins Road, Suite 103
Rosemont, IL 60018

Attention: Steve Wanner

Subject: Landscape Environmental Evaluation, Four County Landfill Site, Fulton County, Indiana
(CBBEL Project No. 94-118)

Dear Mr. Wanner:

In response to your request, we have completed a landscape environmental evaluation of the above-referenced parcel in Fulton County, Indiana. The investigation of the site by Christopher B. Burke Engineering, Ltd. (CBBEL) staff was landscape community based within the identified study area. Each of the existing land uses or vegetative communities are depicted on Exhibit 6 and described in appropriate portions of this report.

The staffing for the field reconnaissance included Jedd Anderson, Tom McArdle and Kelly Rice. Mr. Anderson is a Geologist/Wetland Specialist with six years experience. He has worked on over 550 wetlands/environmental projects and has obtained over 150 Corps of Engineers Section 404 permits. Mr. McArdle has a Masters in Forest Ecology and has worked on over 250 wetland/environmental projects. Ms. Rice is a Wildlife Biologist who specializes in threatened and endangered species. Ms. Rice has worked through the United States on numerous projects.

In the opinion of CBBEL, the division of the subject landscape into lowland, upland and alternative use areas was of primary importance. Descriptions of each of these landscape divisions, with appropriate community divisions and habitat evaluations, are presented following a review of existing site information.

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130 West Main Street Suite 12 Fort Wayne, Indiana 46802 TEL (219) 422-9395 FAX (219) 422-3159

LOCATION

The ± 320 acre study area is bisected by State Highway 17, south of State Highway 110, near Delong, Indiana, which is approximately 1 mile to the northeast, as shown on Exhibit 1. The study area parcel contains 8 quarter-quarter sections and is located in Aubbeenaubbee Township of Fulton County. The investigation did not include the area of the landfill located inside the fence.

Additional nearby towns include Leiters Ford which is approximately 2 miles to the southeast, Culver which is approximately 6 miles to the north and Rochester which is approximately 15 miles to the southeast.

Geographically, the study area is located in the southwest 1/4 of Section 16, southeast 1/4 of Section 17, northeast 1/4 of Section 20 and northwest 1/4 of Section 21, Township 31 North, Range 1, East of the Third Principal Meridian.

NATIONAL WETLAND INVENTORY

The National Wetland Inventory (NWI) for the Culver Quadrangle (date unknown), as illustrated on Exhibit 2, indicates the presence of a variety of wetland areas within the study area. It should be noted that the NWI serves only as a large-scale guide and that the actual wetland types and boundaries often vary. The wetlands identified by the NWI are typical of midwestern United States wetlands and described as the following (Illinois Department of Conservation, 1988):

Pond

- PAB4F - Palustrine, Aquatic Bed, Floating Vascular, Semi-permanently Flooded
- PUBGx - Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated

"The above wetland types are characterized by the presence of nearly permanent open water a minimum of one-half acre in size to a maximum of 20 acres (8 hectares). Although free of vegetation throughout the non-growing season, floating vascular plants and/or algae often comprise a majority of the vegetative mass during the mid-summer months. Rooted vegetation is generally restricted to the shallows. Bottom sediments consist of mud, sand, cobble, gravel and organic debris."

"Man-made ponds are noted with the subscript "x"."

Wet Meadow

- PEMC - Palustrine, Emergent, Seasonally Flooded

"Wet meadows are characterized by moist to saturated soils with standing water present for only brief to moderate periods during the growing season."

"Vegetation includes a wide variety of herbaceous species, from sedges and rushes to forbs and grasses. Woody vegetation, if present, accounts for less than 30% of the total areal cover."

"If the wet meadow is fed by an alkaline water source such as a calcareous spring or seep it is defined as a fen."

"The deposition of calcium and magnesium in the soil results in an elevated soil Ph, and gives rise to a variety of unique plants adapted to these conditions."

Forested

- PF01A - Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded
- PF01B - Palustrine, Forested, Broad-Leaved Deciduous, Saturated
- PF01C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded

"Forested wetlands lack continuously standing water, although repeated flooding is common. Differences in the length of inundation give rise to a variety of community types within this classification. For example, large timbered areas bordering swamps or rivers with frequent flooding (PF01C) often have a poorly developed, very open understory. Silver maple, sycamore, and cottonwood are common, and the forest floor is littered with rotting logs and woody debris deposited by flood water."

"In contrast, drier areas (PF01A), where flooding is not as prolonged, have a greater diversity of plant species, with oaks, elms, and hickory common in the canopy. The forest floor in these areas is often covered by a variety of annual and/or perennial plants."

Scrub-Shrub

- PSS1C - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded

  "A scrub-shrub wetland typifies a community in transition. Many emergent wetlands, left undisturbed, will gradually be replaced through succession by woody vegetation that will in time develop into a mature forest. Notable exceptions are shrub-bogs which climax with the scrub-shrub phase."

  "The scrub-shrub wetland is often found grading shoreward from an emergent wetland which borders a lake, stream or pond. The woody vegetation accounts for at least 30% of the vegetation present and must be less than 20 feet (6 meters) tall."

SOIL SURVEY

The Soil Survey of Fulton County, Indiana (1987), as shown on Exhibit 3, was studied to determine the location of hydric and non-hydric soils within the study area. Differing soil conditions, as shown in soil profiles and identified by the survey, can be indicative of differing community types and wetland conditions. The soils which are identified to be present on the property are described in the Soil Survey as the following:

- Bb - Barry Loam - Hydric

  "The Barry series consists of deep, poorly drained, moderately permeable soils on glacial till plains. These soils formed in glacial till. Slopes range from 0 to 2 percent."

- CrA - Crosier Loam - Hydric

  "The Crosier series consists of deep, somewhat poorly drained, moderately slowly permeable soils on uplands. These soils formed in loamy glacial till. Slopes range from 0 to 2 percent."

- Hh - Histosols - Aquolls Complex - Hydric

  "These nearly level and depressional, deep, very poorly drained soils are in marshy areas on lake plains, outwash plains, till plains and moraines. They are covered by shallow water most or all of the year. The organic Histosols and mineral Aquolls occur as areas so intricately mixed or so small that mapping them separately is not practical."

- Ho - Houghton Muck, Undrained - Hydric

  "The Houghton series consists of deep, very poorly drained, moderately slowly permeable to moderately rapidly permeable soils in bogs on lake plains, outwash plains, till plains, and moraines. These soils formed in deep deposits of organic material. Slopes range from 0 to 2 percent."

- MaA - Markton Loamy Sand

  "The Markton series consists of deep, somewhat poorly drained soils on lake plains and till plains. These soils are rapidly permeable in the upper part of the solum and moderately permeable in the lower part and in the underlying material. They formed in sandy glaciofluvial material and in the underlying loamy till. Slopes range from 0 to 2 percent."

- MeB - Metea Loamy Sand

  "The Metea series consists of deep, well drained soils on glacial moraines and till plains. These soils are rapidly permeable in the upper part and moderately permeable in the lower part. They formed in water- or wind-deposited sandy material over loamy till. Slopes range from 0 to 12 percent."

- Se-Sebewa Sandy Clay Loam

  "The Sebewa series consists of deep, very poorly drained soils on outwash plains and terraces. These soils are moderately permeable in the solum and rapidly permeable in the underlying material. They formed in loamy and sandy glacial outwash. Slopes range from 0 to 2 percent."

- Wa - Wallkill Silt Loam - Hydric

  "The Wallkill series consists of deep, very poorly drained soils in depressions on uplands and outwash plains. These soils formed in alluvium over organic material. They are moderately permeable in the mineral material and moderately rapidly permeable or rapidly permeable in the organic material. Slopes range from 0 to 2 percent."

- Wh - Washtenaw Silt Loam - Hydric

  "The Washtenaw series consists of deep, very poorly drained soils in nearly level or depressional areas on moraines, till plains, and outwash plains. These soils are moderately permeable in the upper part of the solum and slowly permeable in the lower part and in the underlying material. They formed in alluvium over glacial drift. Slopes range from 0 to 2 percent."

- WkB. WkC2, Wkd - Wawasee Fine Sandy Loam

  "The Wawasee series consists of deep, well drained, moderately permeable soils on glacial till plains and moraines. These soils formed in glacial till. Slopes range from 2 to 18 percent."

DRAINAGE

The United States Geological Survey (USGS) map for the Culver Quadrangle (date unknown), as illustrated on Exhibit 4, was reviewed to determine the historic local drainage pattern. The USGS indicates study area drainage flows to the north and west and is tributary to the Tippecanoe River.

FLOOD INSURANCE RATE MAP

The Flood Insurance Rate Map (FIRM), Community Panel Number 180070 0025 B, Unincorporated Fulton County, Indiana, effective July 3, 1985, as shown on Exhibit 5, was reviewed to determine the location of regulatory floodplain within the study area. Mapped floodplain can be indicative of wetland hydrology. The FIRM indicates the study area is located in Zone C floodplain which is defined as area outside the 500-year floodplain limits.

NATURAL COMMUNITY CLASSIFICATION

On June 14, 1994, Christopher B. Burke Engineering, Ltd. (CBBEL) staff members performed a field reconnaissance of the study area. The approximate boundaries of each identified vegetative community and/or alternative land use area are shown on Exhibit 6. The existing site information and aforementioned exhibits were used to assist in the formation of the community boundaries. The wetland boundaries were determined in accordance with the methodology established by the U.S. Army Corps of Engineers (COE).

STUDY AREA

The present study area is composed of eight quarter-quarter sections of approximately 40 acres each. These eight quarter-quarter sections surround a center quarter-quarter section which contains the majority of the Fulton County Landfill. This center parcel was surrounded by a security fence and was not included in our landscape and environmental evaluation.

The surrounding study area contains a variety of lowland and upland communities, agricultural croplands, old fields, private residences and existing roads. The lowland areas contained wetland hydrology, hydrophytic vegetation and hydric soil characteristics and, in the opinion of the CBBEL field investigators, are considered jurisdictional wetland and are regulated by the U.S. Army Corps of Engineers.

LOWLAND COMMUNITIES - WETLAND DELINEATION

The Corps of Engineers Wetland Delineation Manual, dated January, 1987, identifies the mandatory technical criteria for wetland identification. The three essential characteristics of a jurisdictional wetland are hydrophytic vegetation, hydric soils, and wetland hydrology.

The hydrophytic vegetation criteria is based on a separation of plants into five basic groups: (1) obligate wetland plants (OBL) that occur almost always (estimated probability >99%) in wetlands under natural conditions; (2) facultative wetland plants (FACW) that usually occur in wetlands (estimated probability 67-99%), but occasionally are found in nonwetlands; (3) facultative plants (FAC) that are equally likely to occur in wetlands or nonwetlands (estimated probability 34-66%); and (4) facultative upland plants (FACU) that usually occur in nonwetlands (estimated probability 67-99%), but occasionally are found in wetlands (estimated probability 1-33%). If a species occurs almost always (estimated probability >99%) in nonwetlands under natural conditions, it is considered an obligate upland plant (UPL). If greater than 50% of the plants present are FAC, FACW, or OBL the subject area is considered jurisdictional in terms of vegetation.

Hydric soils are defined in the manual as "soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part". Field indicators include color, mottling, gleying and odor.

The wetland hydrology criterion is often the most difficult to determine. Typically, the presence of water for a week or more during the growing season creates anaerobic conditions in the soil. Anaerobic conditions lead to the prevalence of wetland plants. Morphological adaptations of plants, driftlines, and water marks are examples of wetland hydrology field indicators.

The following is a brief description of each identified wetland type with a list of the dominant plant species observed and their corresponding wetland indicator categories. A quality rating is also included for each plant species. The ratings were established by Swink and Wilhelm (1979) and attempt to quantify a wetland's native attributes for comparative purposes. It should be noted that these lists are community based and specific differences exist between individual wetlands because of hydrology characteristics.

Although all wetlands have some natural values, many have experienced significant disturbances in the recent past. Invasive species can capitalize and form monocultures that may reduce a wetland's uniqueness and benefits to wildlife. The Swink and Wilhelm system is recognized by the COE as a measure of past and present disturbance. A mean rated quality of 1 - 3 is considered low, a quality rating of 3 - 5 is considered fair, but such wetlands are uncommon in highly disturbed areas.

Forested Wetland

This wetland type is located in areas designated with FO as depicted on Exhibit 6. In general, these communities are composed of older growth, hydrophytic species with a sparse coverage of herbaceous vegetation within the interior zones.

At the time of the field visit, the interiors contained primarily inundated conditions, however, soil saturation is likely to dominate throughout much of the growing season. Forested wetlands commonly contain fewer herbaceous species because fewer plants are adapted to both anaerobic conditions and reduced sunlight from a closed canopy. The transitional perimeters surrounding the wetlands contain a greater diversity and a higher density of herbaceous growth.

A plant list of representative dominants from this community type is presented below.

Rating	Scientific Name	Common Name	Wetland Category
2	Fraxinus pennsylvanica	Green Ash	FACW
3	Ulmus americana	American Elm	FACW-
4	Ulmus rubra	Slippery Elm	FAC
0	Acer saccharinum	Silver Maple	FACW
7	Acer rubrum	Red Maple	FAC
0	Acer negundo	Box Elder	FACW-
2	Populus deltoides	Cottonwood	FAC+
8	Quercus palustris	Pin Oak	FACW
7	Carya cordiformis	Yellowbud Hickory	FAC
-3	Rhamnus frangula	Glossy Buckthorn	FAC+
15	Asimina triloba	Paw Paw	FAC
2	Parthenocissus quinquefolia	Virginia Creeper	FAC-
0	Polygonum persicaria	Knotweed	FACW
5	Iris virginica	Blue Flag	OBL
6	Osmunda cinnamomea	Cinnamon Fern	FACW
7	Potamogeton natans	Pondweed	OBL

1	Rhus radicans	Poison Ivy	FAC+

66 Total
Mean Rated Quality = 3.9 : Fair

Scrub-Shrub Wetland

This wetland type is located in areas designated with SS as depicted on Exhibit 6. In general, these communities are composed of smaller stems of lower quality invasive species commonly associated with wetlands adjacent to disturbances. The typical disturbances found within the study area, and influencing the development of these transitional communities, include cultivation, residential development and the creation of roads.

The vegetative composition of these areas is characterized by a mixture of woody vegetation and herbaceous material that form a multiple storied canopy with dense vegetation in both the understory and overstory. At the time of the field visit, the areas contained primarily saturated soil profiles, however, pockets of inundation can be expected early in the growing season. Species found in these wetlands often vary within a narrow band as influenced by length of inundation and degrees of disturbance.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
4	Salix nigra	Black Willow	OBL
0	Salix fragilis	Crack Willow	FAC+
1	Salix interior	Sandbar Willow	OBL
2	Fraxinus pennsylvanica	Green Ash	FACW
0	Acer negundo	Box Elder	FACW-
2	Populus deltoides	Cottonwood	FAC+
1	Prunus virginiana	Choke Cherry	FAC-
1	Crataegus crus-galli	Cockspur Hawthorn	FAC
1	Rhus glabra	Smooth Sumac	NI
-3	Rhamnus frangula	Glossy Buckthorn	FAC+
0	Poa pratensis	Kentucky Blue Grass	FAC-
-3	Solanum dulcamara	Nightshade	FAC
-3	Cirsium arvense	Canada Thistle	FACU
3	Erigeron strigosus	Daisy Fleabane	FAC-
1	Aster pilosus	Hairy Aster	FACU+
-1	Bromus inermis	Hungarian Brome	FAC

2	H. grosseserratus	Saw-Tooth Sunflower	FACW-
2	Apocynum sibiricum	Dogbane	FAC+
-1	Xanthium strumarium	Cocklebur	FAC
1	Typha latifolia	Broad-Leaf Cattail	OBL

10 Total
Mean Rated Quality = 0.5 : Low

Wet Meadow Wetland

This wetland type is located in areas designated with WM as depicted on Exhibit 6. These communities are composed of a dominance of hydrophytic. herbaceous species of moderate quality but subject to degradation by nearby cultivation. A variety of plants associated with wetlands of higher quality were identified, however, a number of invasive species were noted and can be expected to increase in importance.

At the time of the field visit, the soil profiles contained saturated conditions with some inundation though standing water appears to be present for only brief to moderate periods during the growing season. These wetland communities require periods of inundation, however, a drawdown of the water table, which allows air into soil pore spaces, is necessary to create conditions suitable for wet meadow establishment.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
0	Phalaris arundinacea	Reed Canary Grass	FACW+
5	Eleocharis obtusa	Spikerush	OBL
4	Juncus dudleyi	Dudley's Rush	FACW
0	Poa pratensis	Kentucky Blue Grass	FAC-
2	Apocynum sibiricum	Dogbane	FAC+
5	Carex stricta	Sedge	OBL
2	Carex vulpinoidea	Sedge	OBL
3	Carex sparganioides	Sedge	FAC
4	Asclepias incarnata	Swamp Milkweed	OBL
-1	Rumex crispus	Curly Dock	FAC+
0	Polygonum pensylvanicum	Knotweed	FACW+
5	Leersia oryzoides	Rice Cut Grass	OBL
1	Typha latifolia	Broad-Leaf Cattail	OBL
-1	Xanthium strumarium	Cocklebur	FAC
1	Salix interior	Sandbar Willow	OBL

0	Salix fragilis	Crack Willow	FAC+
30	Total		

Mean Rated Quality = 1.9 : Low

Forested - Scrub-Shrub - Marsh Wetland

This wetland type is located in areas designated with FO-SS-M as depicted on Exhibit 6. These communities were composed of a mixture of vegetative types with zones of varying inundation and soil saturation. Areas of permanent inundation were dominated by herbaceous, obligate species while woody species showed an increased presence in areas defined as saturated. It appears as if there has been an increase in ponding as represented by large dead trees which are incapable of surviving in complete anaerobic conditions.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
2	Fraxinus pennsylvanica	Green Ash	FACW
3	Ulmus americana	American Elm	FACW-
0	Acer saccharinum	Silver Maple	FACW
0	Acer negundo	Box Elder	FACW-
2	Populus deltoides	Cottonwood	FAC+
7	Carya cordiformis	Yellowbud Hickory	FAC
4	Salix nigra	Black Willow	OBL
1	Salix interior	Sandbar Willow	OBL
-3	Rhamnus frangula	Glossy Buckthorn	FAC+
-3	Solanum dulcamara	Nightshade	FAC
1	Typha latifolia	Broad-Leaf Cattail	OBL
2	Typha angustifolia	Narrow-Leaf Cattail	OBL
1	Lythrum salicaria	Purple Loosestrife	OBL
6	Scirpus fluviatilis	River Bulrush	OBL
4	Scirpus atrovirens	Dark Green Bulrush	OBL
5	Carex stricta	Sedge	OBL
2	Polygonum hydropiper	Smartweed	OBL
0	Phalaris arundinacea	Reed Canary Grass	FACW+
5	Lycopus americanus	Bugleweed	OBL
5	Panicum virgatum	Switchgrass	FAC+
N/A	Potamogeton spp.	Pondweed	OBL
10	Carex lacustris	Lakebank Sedge	OBL
6	Cornus stolonifera	Red Osier Dogwood	FACW

5	Iris virginica	Blue Flag	OBL
6	Osmunda cinnomomea	Cinnamon Fern	FACW
7	Acer rubrum	Red Maple	FAC
4	Vitis riparia	Riverbank Grape	FACW-

82 Total
Mean Rated Quality = 3.2 : Fair

Farmed Wetland

This wetland type is located in areas designated with FW as depicted on Exhibit 6. These wetland areas are highly disturbed by cultivation during drier years, however, they appear to remain unfarmed in most years and developed wetland vegetation characteristics. In many cases, farmed wetlands are associated with well-drained, cultivated fields that contain pockets which have broken or clogged tiles which do not readily convey water off-site. This appears to be the case of this wetland type within this study area.

The vegetative composition is indicative of prior cultivation in that pioneer species of herbaceous material dominate. Species diversity is low and characteristic of low quality invasives often associated with open lowlands or uplands.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
-1	Xanthium strumarium	Cocklebur	FAC
0	Phalaris arundinacea	Reed Canary Grass	FACW+
0	Polygonum pensylvanicum	Knotweed	FACW+
0	Setaria glauca	Yellow Foxtail	FAC
0	Poa pratensis	Kentucky Blue Grass	FAC-
-1	Abutilon theophrasti	Velvetleaf	FACU
0	Ambrosia trifida	Giant Ragweed	FAC+
-3	Solanum dulcamara	Nightshade	FAC
-1	Rumex crispus	Curly Dock	FAC+

-6 Total
Mean Rated Quality <0 : Low

Pond

This wetland type is located in an area designated with a P as depicted on Exhibit 6. The community is characterized as an excavated open water pond with surrounding wetland vegetation. The dominant species is Kentucky Blue Grass with other herbaceous material invading along the shoreline.

A plant list of representative vegetation from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
0	Poa pratensis	Kentucky Blue Grass	FAC-
0	Phalaris arundinacea	Reed Canary Grass	FACW+
3	Erigeron strigosus	Daisy Fleabane	FAC-
-1	Bromus inermis	Hungarian Brome	FAC
0	Juncus tenuis	Path Rush	FAC
-3	Solanum dulcamara	Nightshade	FAC
1	Typha latifolia	Broad-Leaf Cattail	OBL
1	Lythrum salicaria	Purple Loosestrife	OBL

1 Total
Mean Rated Quality = 0.1 : Low

UPLAND COMMUNITIES

Forest

This upland community type, which is highly influenced by available water, is located in areas designated with U-FO as depicted on Exhibit 6. These upland woods, which are interspersed with wetland pockets, are somewhat open, older growth and relatively undisturbed. They are dominated by primarily facultative and facultative upland species characteristically found in the upper Midwest region of the United States.

In somewhat drier, sandy soil, xeric species including Black Oak (Q. velutina) Red Oak (Q. rubra), White Oak (Q. alba) and Dogwood (C. florida) dominate. However, on more mesic sites, usually bordering wetland areas, Green Ash (F. pennsylvanica), American Elm (U. americana) and Basswood (T. americana) increase in relative importance. The entire woods contain a somewhat well-developed herbaceous layer and a lower density intermediate canopy.

The forest floor contains edaphic conditions characteristic of drier, older growth sites. The duff layer is a mixture of leaf litter, twigs and partially decomposed organic matter. A number of larger logs and branches were noted throughout the area. There is a layer of undecomposed detritus suggesting decomposition proceeds at slow rates as a result of low moisture content.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
4	Quercus alba	White Oak	FACU
6	Quercus velutina	Black Oak	FACU
7	Quercus rubra	Red Oak	FACU
10	Cornus florida	Flowering Dogwood	FACU-
1	Prunus serotina	Black Cherry	FACU
5	Tilia americana	Basswood	FACU
5	Juglans nigra	Black Walnut	FACU
2	Carya ovata	Shagbark Hickory	FACU
2	Fraxinus pennsylvanica	Green Ash	FACW
3	Ulmus americana	American Elm	FACW-
5	Ostrya virginiana	Ironwood	FACU-
10	Liriodendron tulipifera	Tulip Tree	FACU+
15	Asimina triloba	Paw Paw	FAC
10	Fagus grandifolia	Beech	FACU
2	Parthenocissus quinquefolia	Virginia Creeper	FAC-
5	Trillium recurvatum	Red Trillium	FACU-
2	Similacina racemosa	False Solomon's Seal	FACU
5	Podophyllum peltatum	May Apple	FACU
4	Geranium maculatum	Wild Geranium	FACU
1	Galium aparine	Bedstraw	FACU
2	Urtica procera	Tall Nettle	FAC+
1	Rhus radicans	Poison Ivy	FAC+

110 Total
Mean Rated Quality = 5.0 : Fair

Scrub-Shrub

This upland community type is located in areas designated with U-SS as depicted on Exhibit 6. In each of these areas a close association can be made between this community type and degraded woods. Though the dominant vegetation is of smaller diameter and in more dense stands, a number of large stems are scattered

throughout the area. In general, it appears as if these areas are in successional transition from moderately recent clearing. It can be expected that in time, the upper canopy will develop further, close and shade intolerant, pioneer species. Current dominants can be expected to give way to species found in the forest community.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
3	Ulmus americana	American Elm	FACW-
4	Ulmus rubra	Slippery Elm	FAC
5	Fraxinus americana	White Ash	FACU
1	Crataegus crus-galli	Cockspur Hawthorn	FAC
4	Quercus alba	White Oak	FACU
-3	Rosa multiflora	Multiflora Rose	FACU
1	Rhus glabra	Smooth Sumac	NI
3	Rubus allegheniensis	Blackberry	FACU+
1	Rhus radicans	Poison Ivy	FAC+
1	Festuca elatior	Field Rescue	FACU-
2	Rubus occidentalis	Raspberry	FACW-
0	Taraxacum officinale	Dandelion	FACU
1	Prunus virginana	Choke Cherry	FAC-
1	Prunus serotina	Black Cherry	FACU
1	Daucus carota	Queen Anne's Lace	FACU
25	Total		

Mean Rated Quality = 1.7 : Low

Open Field

This upland community type is located in areas designated with OF as depicted on Exhibit 6. It appears as if these areas were recently cultivated and subsequently abandoned and/or grazed. The vegetation is dominated by facultative and facultative upland herbaceous species that thrive in areas of direct sunlight. In general, this community type contains lower quality, invasive plants with a small number of woody stems throughout.

A plant list of representative dominants from this community type is listed below.

Rating	Scientific Name	Common Name	Wetland Category
0	Poa pratensis	Kentucky Blue Grass	FAC-
1	Festuca elatior	Field Fescue	FACU-
1	Solidago altissma	Tall Goldenrod	FACU
-3	Rosa multiflora	Multiflora Rose	FACU
1	Daucus carota	Queen Anne's Lace	FACU
1	Cichorium intybus	Chicory	FACU
-3	Cirsium arvense	Canada Thistle	FACU
-3	Cirsium vulgare	Bull Thistle	FACU-
3	Erigeron strigosus	Daisy Fleabane	FAC-
-3	Melilotus alba	White Sweet Clover	FACU
-2	Aster pilosus	Hairy Aster	FACU+
-1	Bromus inermis	Hungarian Brome	FACU
1	Trifolium hybridum	Alsike Clover	FAC-
0	Ambrosia elatior	Common Ragweed	FACU
1	Phleum pratense	Timothy	FACU
1	Trifolium repens	White Clover	FACU+

-4 Total
Mean Rated Quality < 0 : Low

Cultivated Field

This upland land use type is located in areas designated with C as depicted on Exhibit 7. These areas are currently plowed for cultivation and contain remnant corn and soybean vegetation from last year's crop. Few additional species were noted during the field visit.

A plant list of identified species is listed below.

Rating	Scientific Name	Common Name	Wetland Category
N/A	Zea mays	Corn	NI
N/A	Glycine max	Soybean	NI
-1	Xanthium strumarium	Cocklebur	FAC
0	Ambrosia elatior	Common Ragweed	FACU
-1	Setaria viridis	Green Foxtail	FAC
-1	Abutilon theophrasti	Velvetleaf	FACU

-3 Total
Mean Rated Quality < 0 : Low

Residential Area

This upland land use type is located in areas designated with R as depicted on Exhibit 6. These areas are located primarily adjacent to roads within the study area and contain standing structures and adjacent open lawn space. Structures found in the upland forest in the northern portion of the study area appeared abandoned and were not considered residential.

Fill Area

This upland land use type is located in areas designated with F as depicted on Exhibit 6. These areas are restricted to the portion of the study area directly east of the landfill site. The fill material appears to contain primarily soil and crushed stone. Little vegetation is present with the exception of Canada Bluegrass (P. compressa) which is a common ground cover in open, disturbed areas.

WILDLIFE OBSERVATIONS

In the opinion of CBBEL staff, the subject site contains several community types which have a significant wildlife habitat value. The large variety and interspersion of different communities provides habitat for an even larger number of "edge" species or those that prefer the ecotones between two habitat types. Several of the natural communities identified on-site, such as the mature upland and lowland forests, are valuable because their acreage is rapidly decreasing in this part of the country and they take a long period of time to regenerate. For these reasons, many portions of the study area appear to have a substantial value to wildlife. An inventory of all identified wildlife species observed on the site is listed below along with the natural vegetation community in which they were sighted. A discussion of potential wildlife use of the existing habitat types is also presented.

During the site visit on June 14, 1994, the following species of wildlife were noted by CBBEL staff members. This list was compiled during a field reconnaissance of the study area and is not to be construed as a cumulative inventory of all wildlife species utilizing the site.

Birds

Common Name	Scientific Name	Community Sighted In [1]
Red-Winged Blackbird	*Agelaius phoeniceus*	WM, M, P, FO-SS-M
Song Sparrow	*Melospiza melodia*	C, FO, U-FO, U-SS

Field Sparrow	*Spizella pusilla*	C, R, U-SS
Common Grackle	*Quiscalus quiscula*	FW, WM, OF, U-FO
American Goldfinch	*Carduelis tristis*	SS, FO, WM, U-SS,
Gray Catbird	*Dumetella carolinensis*	FO-SS-M
Northern Flicker	*Colaptes auratus*	U-FO
Tufted Titmouse	*Parus bicolor*	FW, U-FO
Killdeer	*Charadrius vociferus*	C, OF
Chimney Swift	*Chaetura pelagica*	C, R, OF
American Crow	*Corvus brachyrhynchos*	FO, U-FO-SS, U-FO
Eastern Phoebe	*Sayornis phoebe*	U-FO, FO
American Robin	*Turdus migratorius*	R, WM, FO, SS, U-FO
Dark-Eyed Junco	*Junco hyemalis*	U-FO, U-SS
Northern Bobwhite	*Colinus virginianus*	OF
Cedar Waxwing	*Bombycilla cedrorum*	OF, R, U-FO
Downy Woodpecker	*Picoides borealis*	FO-SS-M, U-FO
Blue Jay	*Cyanocitta cristata*	FO-SS-M, R, U-FO
Northern Cardinal	*Cardinalis cardinalis*	FO, U-FO-SS
Red-Tailed Hawk	*Buteo jamaicensis*	C, OF, U-FO
Brown Thrasher	*Toxostoma rufum*	U-FO-SS, U-FO

Mammals

Common Name	Scientific Name	Community Sighted In [1]
Raccoon	*Procyon lotor*	FO, SS, FO-SS-M
White-Tailed Deer	*Odocoileus virginianus*	FO, FO-SS-M, U-FO, U-SS
Fox Squirrel	*Sciurus niger*	FO, U-FO
Woodchuck	*Marmota monax*	OF, U-FO
Red Fox	*Vulpes vulpes*	U-FO

Butterflies

Common Name	Scientific Name	Community Sighted In [1]
Eastern Tiger Swallowtail	*Papilio glaucus*	FO-SS-M
American Painted Lady	*Cynthia virginiensis*	R, OF

Reptiles/Amphibians

Common Name	Scientific Name	Community Sighted In [1]
Bullfrog	*Rana catesbiana*	FO-SS-M
Northern Leopard Frog	*Rana pipiens*	SS, FO-SS-M

[1] Wetland Communities: FO - Forested Wetland, SS - Scrub-Shrub Wetland, WM - Wet Meadow, M - Marsh, FW - Farmed Wetland, P -Pond
Upland Communities: U-FO - Upland Forest, U-SS - Upland Scrub-Shrub, OF - Open Field, C - Cultivated, R - Residential, F - Fill Area

POTENTIAL WILDLIFE UTILIZATION

Several Indiana state or federally listed endangered or threatened species have the potential to occur on the subject site based on known ranges and habitat preferences. Although none of the federally listed endangered or threatened species were observed during the field visit, those protected species with the potential for occurring in the vicinity of the site and which community types they would most likely frequent are presented in the following summary.

Birds

The **American bittern** (Botaurus lentiginosus), **great egret** (Casmerodius albus), **black-crowned night heron** (Nycticorax nycticorax), **yellow-crowned night heron** (Nyctanassa violacea) and **king rail** (Rallus elegans) are all classified as endangered in the state of Indiana. All of these wading birds have the potential to be found in the inundated wetland areas on the subject site. The scrub-shrub, marsh and forested wetland areas provide more suitable cover and habitat for the American bittern, black-crowned night heron, and yellow-crowned night heron as these birds are more secretive and require a denser vegetation cover. The night herons also prefer to roost in the trees around forested wetland systems. The king rail and great egret may utilize these densely vegetated wetlands, or they may be found in the more open water marshes or ponds that exist on the subject area.

The **sandhill crane** (Grus canadensis) and **yellow-headed blackbird** (Xanthocephalus xanthocephalus) are listed as threatened species in the state of Indiana. Both of these birds characteristically can be found in open marsh systems, but may occasionally forage in farmfields. The marsh systems associated with King Lake would probably provide the most favorable habitat for these birds.

The **osprey** (Pandion haliaetus), **bald eagle** (Haliaeetus leucocephalus), **northern harrier** (Circus cyaneus), **peregrine falcon** (Falco peregrinus), and **short-eared owl** (Asio flammeus) are listed as state endangered with the bald eagle and peregrine falcon also listed as federally endangered. All of these species have the potential to utilize the open field or cultivated areas where an abundant food source of rodents, rabbits, and other small mammals can be found. These expanses of open land are especially favorable because they are bordered by trees which serve as perches for these birds of prey. The proximity of King Lake to the east of the subject site also provides a source of food for several of these species.

The **barn owl** (Tyto alba) is listed as state endangered, but may utilize several areas on the site. Several buildings on the subject area appeared to be abandoned or infrequently used, and these would provide favorable roosting places for the barn owl. This bird of prey also may roost in the forested areas of the site.

The **golden-winged warbler** (Vermivora chrysoptera), **loggerhead shrike** (Lanius ludovicianus), **upland sandpiper** (Bartramia longicauda), and **Henslow's sparrow** (Ammodramus henslowii) are state protected and may be found in several areas on-site. These birds all prefer the open field or pasture and woodland ecotone. The Henslow's sparrow also can be found in the scrub-shrub wetlands or wet meadow areas, however, this species is very secretive and is often difficult to sight.

The **sedge wren** (Cistothorus platensis) is listed as state threatened, but several areas of favorable habitat for this species exist on the subject area. Typically, this secretive bird frequents shallow sedge marshes and wet meadows. Numerous sedge meadow and wet prairie vegetation communities were found on the site.

Mammals

The **Indiana bat** (Myotis sodalis) is classified as state and federally endangered. This species is typically found in wooded or semiwooded areas adjacent to streams and wetlands. The shagbark hickory stands on the property can provide a favorable habitat for their colonies.

The **bobcat** (Lynx rufus) is listed as state endangered in Indiana. This cat is primarily found in scrubby country and fragmented forests, but it also adapts to swamps and farmlands if rocky or brushy habitat exists. The upland and wetland scrub-shrub and forested areas on the subject site would provide favorable bobcat habitat, especially since they have relatively little human intervention.

The **badger** (Taxidea taxidea) has a relatively low chance of utilizing the subject site based upon its known range, but favorable habitat does exist in some of the open fields and farmland/woods ecotones. The badger prefers to live in agricultural and

open areas due to the high numbers of rodents for a food source. The forest/field ecotone provides both a food source and a sheltered area for their burrows.

Reptiles/Amphibians

The **spotted turtle** (Clemmys guttatta) and **eastern mud turtle** (Kinosternon subrubrum subrubrum) are listed as state threatened species. These turtles can be found in soft-bottomed wetlands with slow moving water and abundant vegetation. Both species may be found in either wooded or open wetland systems.

The **copperbelly water snake** (Nerodia erythrogaster neglecta), **smooth green snake** (Opheodrys vernalis), **Kirtland's snake** (Clonophis kirtlandii), **Butler's garter snake** (Thamnophis butleri), and **eastern massasauga** (Sistrurus catenatus catenatus) are all classified as state threatened snakes. These species are typically found in or along the edge of wetland communities including marshy meadows, swamps, forested wetlands, woodland ponds, and bogs. The communities present on the subject area which may be habitat for these snakes include marsh, wet meadow, pond, forested, and scrub-shrub wetland areas or any combination thereof.

The **timber rattlesnake** (Crotalus horridus) is considered state threatened and may be found in the wooded upland areas of the site. This species of snake typically prefers a hilly, wooded terrain with rock outcroppings, but can be found in a wider range of habitats.

The **northern red salamander** (Pseudotriton ruber ruber), **four-toed salamander** (Hemidactylium scutatum), and **northern crawfish frog** (Rana areolata circulosa) can be found in springs, seepages, bogs, marshes, wet meadows, and their surrounding wet woodlands. The subject site contains several areas of wet meadows, marshes, scrub-shrub, and forested wetlands that are suitable habitat for these amphibians. The northern red salamander is classified as state endangered and the four-toed salmander and northern crawfish frog are listed as state threatened.

CONCLUSION

The eight quarter-quarter sections comprising the study area surrounding the Four County Landfill Site in Fulton County, Indiana, contain a variety of natural communities and land uses. In general, the upland and lowland community types located west of State Highway 17, with the exception of residential and cultivated areas, are of somewhat higher quality. In our opinion, these habitats which include forested wetland, upland forest and a complex of forested, scrub-shrub marsh are ecotypes which, though rated as fair by the Swink and Wilhelm method, are of higher quality and decreasing in size and number in the upper Midwest.

In general, the study area east of State Highway 17, with the exception of King Lake and its associated wetland zones, is more highly disturbed and dominated by residences and cultivation. Areas of upland scrub-shrub forest in this portion of the study area appear to be in the early stages of recovery from past cultivation.

The existence of a variety of community types, with associated edges and transition zones, creates a variety of wildlife habitats. In general, wildlife species noted on-site will utilize more undisturbed areas, however, it should be noted that any of the observed species can be found within the entire study area.

It is also important to recognize that wildlife habitats exist which are suitable for the existence and utilization of higher quality species including threatened and endangered species. Though consultation with the Indiana Department of Natural Resources did not identify suitable habitat for threatened and endangered species, further consultation is suggested with the U.S. Fish and Wildlife Service and the Indiana Department of Natural Resources' Environmental Review Coordinator.

In addition, it should be noted that a wide variety of wetland communities were identified within the study area. These wetland areas provide a number of environmental benefits, in addition to wildlife habitat, including stormwater storage, groundwater recharge, and water filtration. These identified wetland areas are jurisdictional and are regulated by the U.S. Army Corps of Engineers and the Indiana Department of Environmental Management.

Under current guidelines and in accordance with customary practices of the COE, the disturbance of one or more acres of jurisdictional wetland requires a permit with mitigation to prevent any net loss of total wetland area. Areas of disturbance less than one acre in size also require a permit to be dredged or filled; however, mitigation may or may not be required depending upon COE discretion. This discretionary judgement is determined by the overall quality of the wetland and what impact the loss of the wetland would have on the surrounding area. The Indiana Department of Natural Resources requires a mitigation ratio of 3:1 or higher for disturbances to forested and scrub-shrub wetlands.

If you have any questions or concerns, please do not hesitate to call.

Very truly yours,

Thomas McArdle
Forest Ecologist

Jedd Anderson for

Kelly N. Rice
Wildlife Biologist

Jedd Anderson

Jedd Anderson
Geologist/Wetland Specialist

Christopher B. Burke, Ph.D., P.E.
President

TM/cks/hmw

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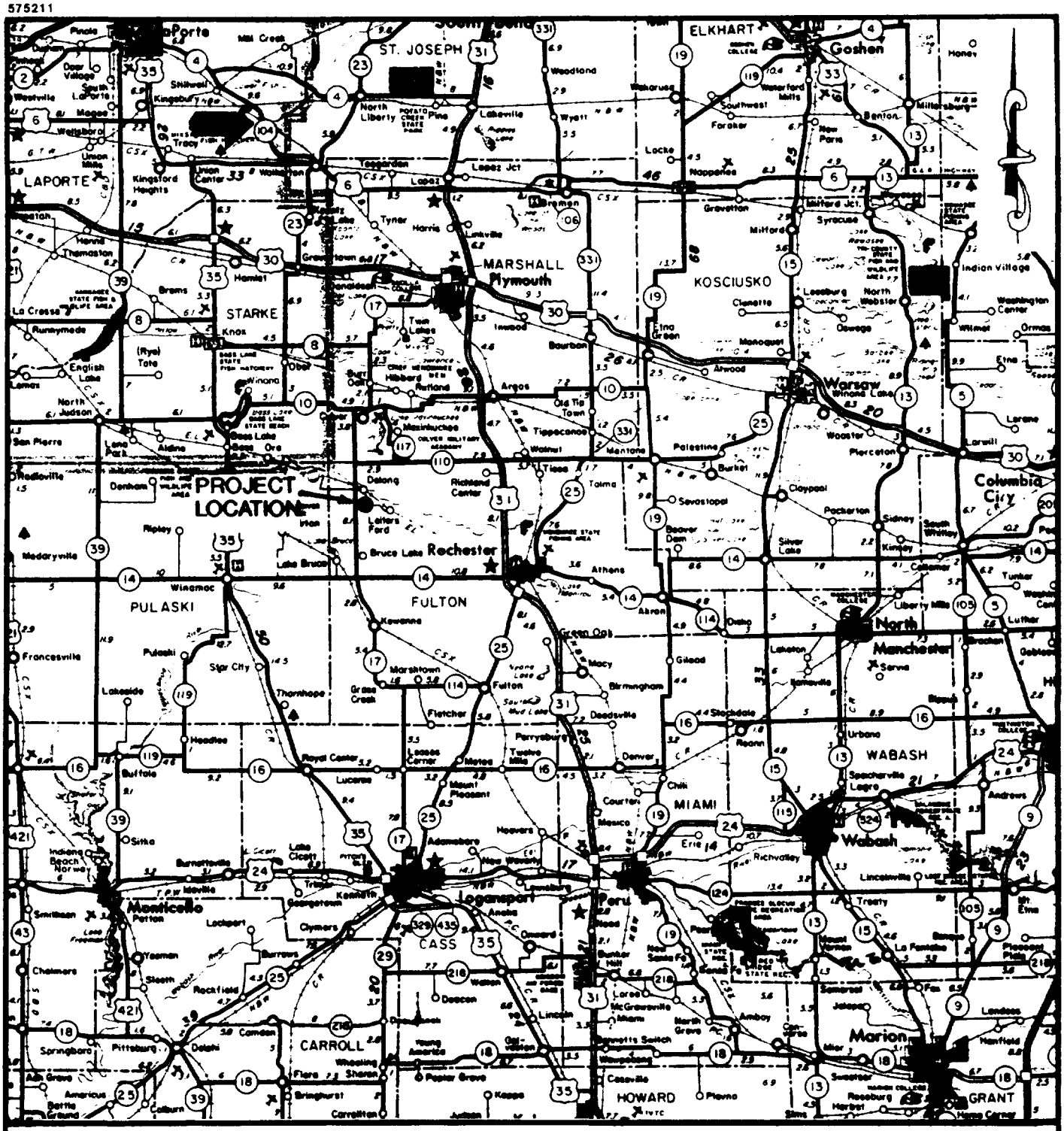
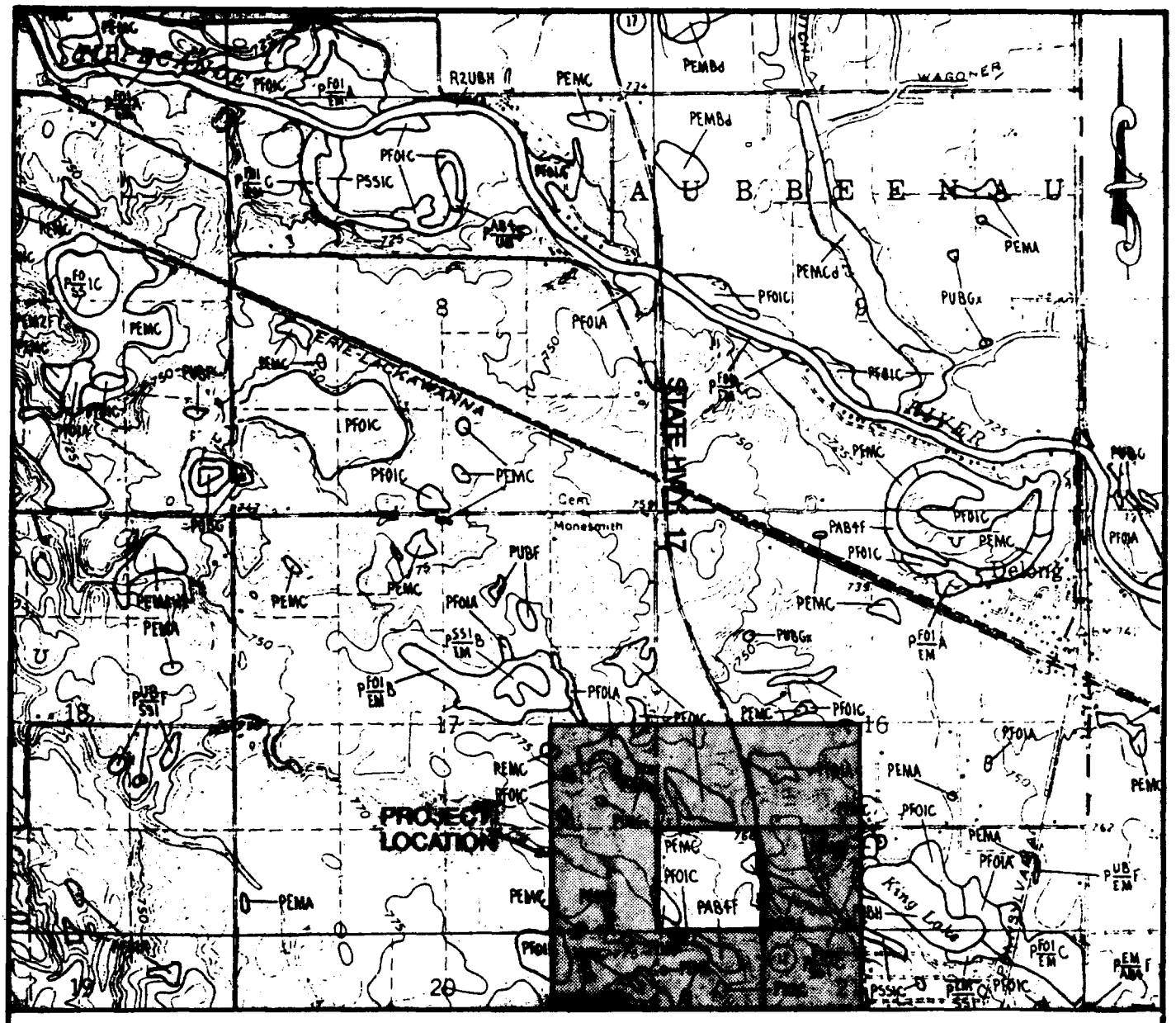


APPROXIMATE SCALE: 1" = 52800'

CHRISTOPHER B. BURKE ENGINEERING, LTD. 9575 WEST HIGGINS ROAD SUITE 600 ROSEMONT, ILLINOIS 60018 (708) 823-0500	CLIENT C.R.A.	PROJECT No. 94-118	APPROVED
	TITLE LOCATION MAP		DATE 7-13-94
			EXHIBIT 1

ROYAL BLUEPRINT COMPANY

571763



NOTE: TAKEN FROM NATIONAL WETLAND INVENTORY, CULVER QUADRANGLE (DATE UNKNOWN)

LEGEND

PAB4F - PALUSTRINE, AQUATIC BED, FLOATING VASCULAR, SEMIPERMANETLY FLOODED
PEMC - PALUSTRINE, EMERGENT, SEASONALLY FLOODED
PFO1A - PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, TEMPORARILY FLOODED
PFO1B - PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SATURATED
PFO1C -PALUSTRINE, FORESTED, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED
PSS1C - PALUSTRINE, SCRUB-SHRUB, BROAD-LEAVED DECIDUOUS, SEASONALLY FLOODED
PUBGx - PALUSTRINE, UNCONSOLIDATED BOTTOM, INTERMITTENTLY EXPOSED, EXCAVATED

APPROXIMATE SCALE: 1" = 2000'

CHRISTOPHER B. BURKE ENGINEERING, LTD
9575 WEST HIGGINS ROAD SUITE 600
ROSEMONT, ILLINOIS 60018 (708) 823-0500

CLIENT C.R.A.	PROJECT No. 94-118	APPROVED
TITLE NATIONAL WETLAND INVENTORY		DATE 7-13-94
		EXHIBIT 2

ROYAL BLUEPRINT COMPANY

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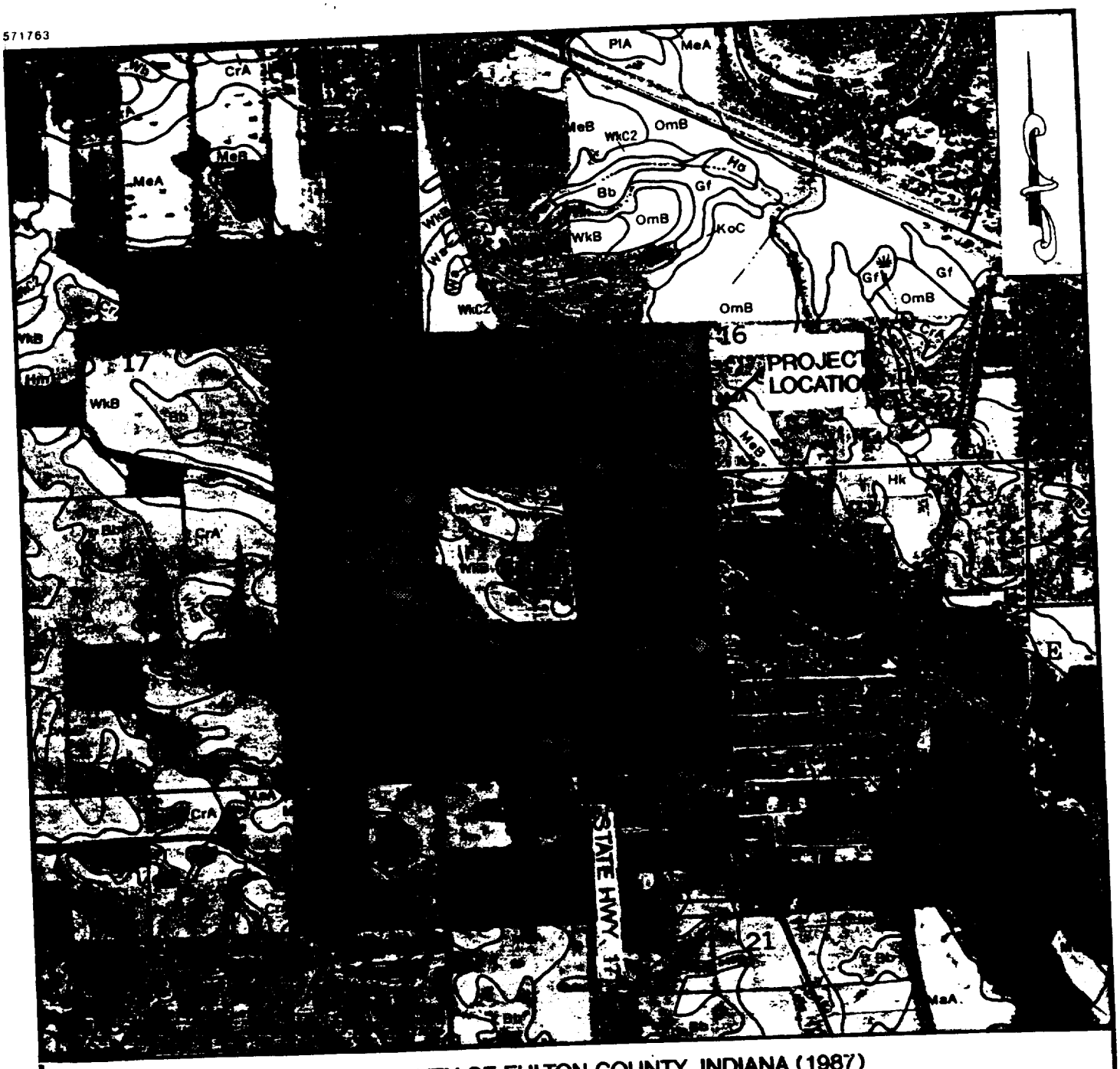


NOTE: TAKEN FROM SOIL SURVEY OF FULTON COUNTY, INDIANA (1987)

LEGEND

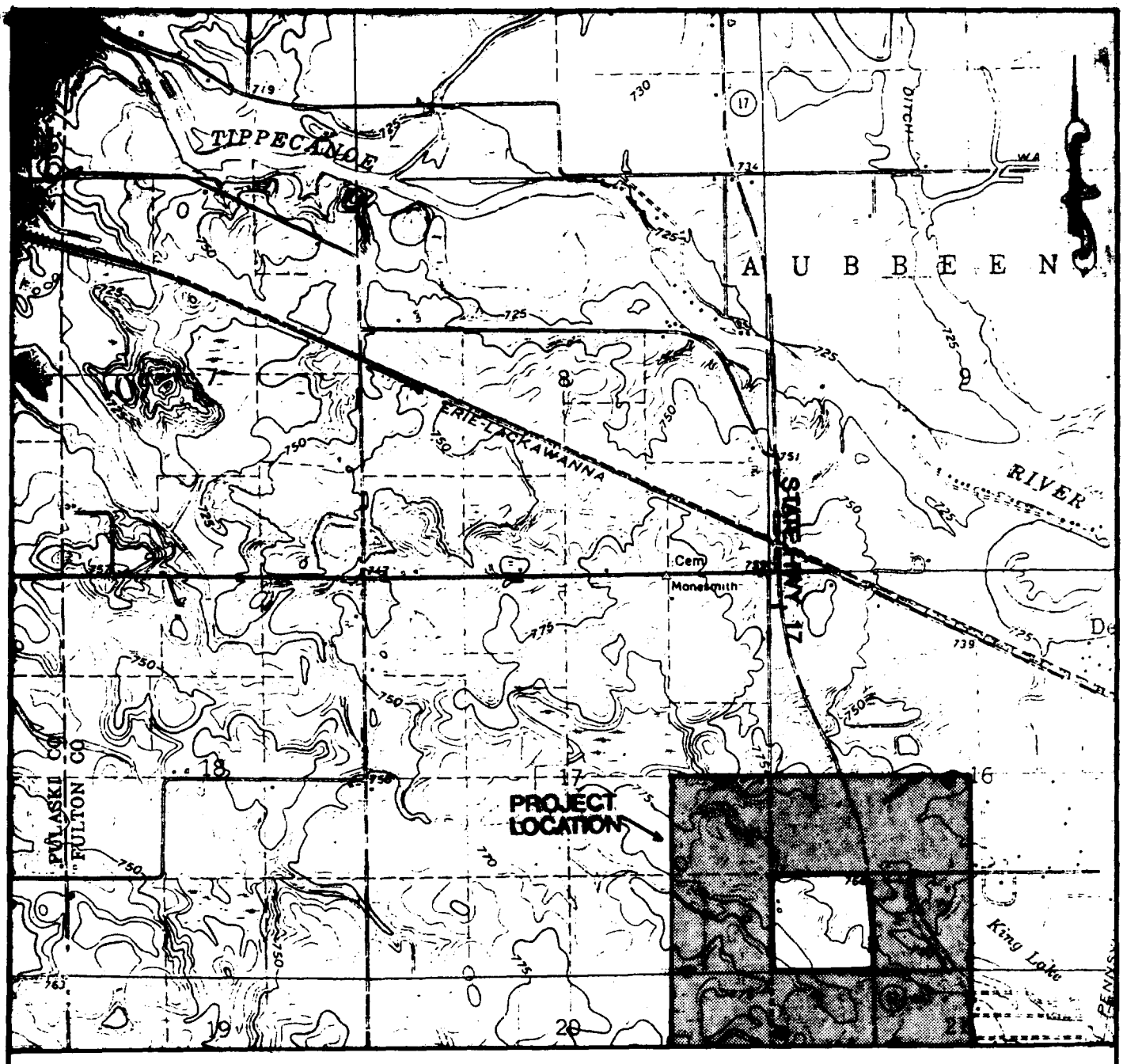
Bb - BARRY LOAM - HYDRIC
CrA - CROSIER LOAM - HYDRIC
Hh - HISTOSOLS-AQUOLLS COMPLEX - HYDRIC
Ho - HOUGHTON MUCK, UNDRAINED - HYDRIC
MaA - MARKTON LOAMY SAND
MeB - METEA LOAMY SAND
Se - SEBEWA SANDY CLAY LOAM
Wa - WALLKILL SILT LOAM - HYDRIC
Wh - WASHTENAW SILT LOAM - HYDRIC
WkB, WkC2, WkD - WAWASEE FINE SANDY LOAM

APPROXIMATE SCALE: 1" = 1320'

CHRISTOPHER B. BURKE ENGINEERING, LTD
9575 WEST HIGGINS ROAD SUITE 600
ROSEMONT, ILLINOIS 60018 (708) 823-0500

CLIENT C.R.A.	PROJECT No 94-118	APPROVED	
TITLE SOILS MAP		DATE 7-13-94	EXHIBIT 3

571763



NOTE: TAKEN FROM USGS TOPOGRAPHICAL SURVEY, CULVER QUADRANGLE (DATE UNKNOWN)

APPROXIMATE SCALE: 1" = 2000'

CHRISTOPHER B. BURKE ENGINEERING LTD 9575 WEST HIGGINS ROAD SUITE 600 ROSEMONT, ILLINOIS 60018 (708) 823-0500	CLIENT C.R.A.	PROJECT No 94-118	APPROVED
	TITLE USGS TOPOGRAPHICAL SURVEY		DATE 7-13-94
			EXHIBIT 4

ROYAL BLUEPRINT COMPANY

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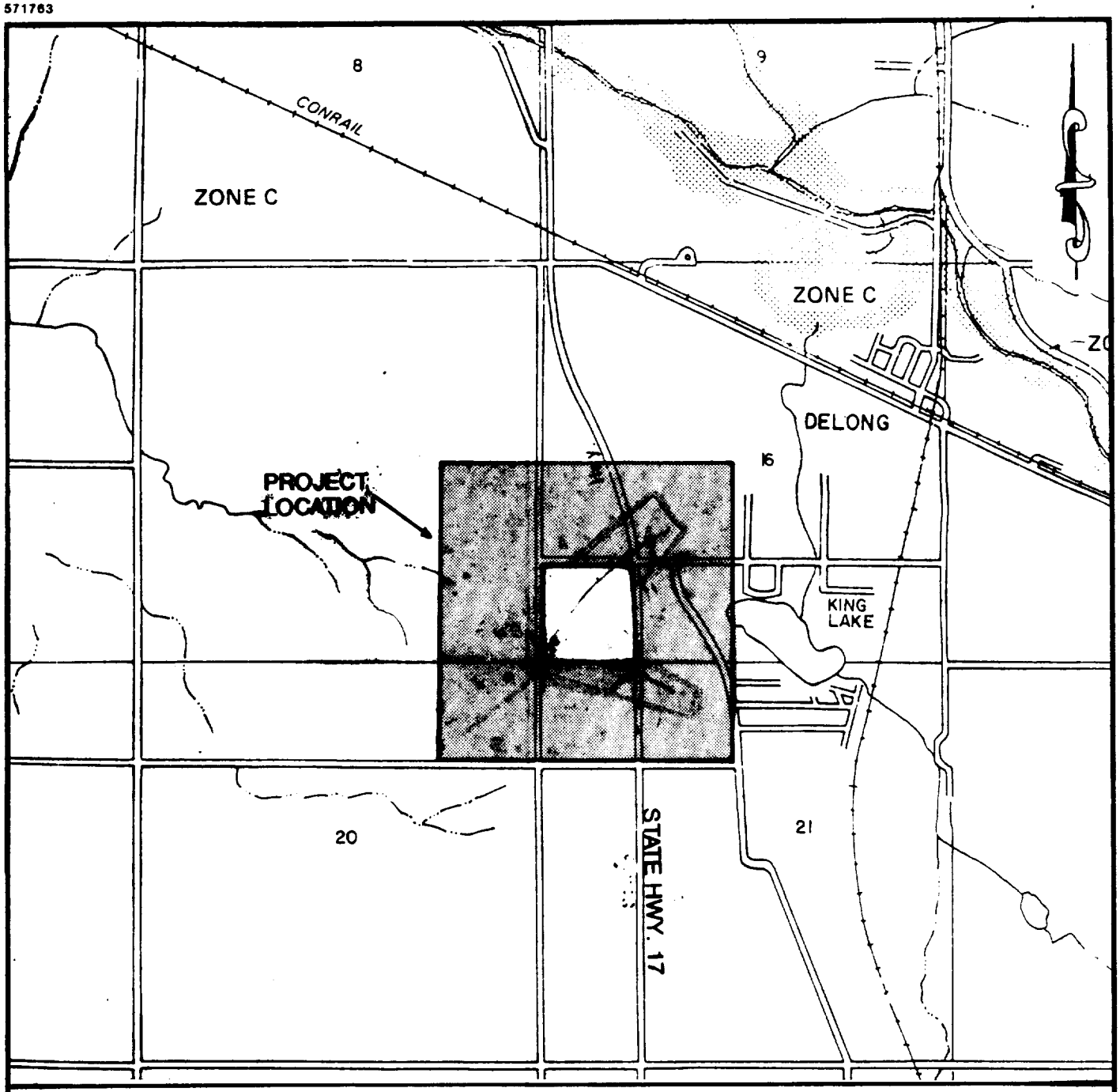


NOTE: TAKEN FROM FLOOD INSURANCE RATE MAP,
UNINCORPORATED FULTON COUNTY, INDIANA
COMMUNITY-PANEL NUMBER: 180070 0025 B
EFFECTIVE DATE: JULY 3, 1985

APPROXIMATE SCALE: 1" = 2000'

CHRISTOPHER B. BURKE ENGINEERING, LTD 9575 WEST HIGGINS ROAD SUITE 600 ROSEMONT, ILLINOIS 60018 (708) 823-0500	CLIENT C.R.A.	PROJECT No. 94-118	APPROVED
	TITLE FIRM		DATE 7-13-94
			EXHIBIT 5

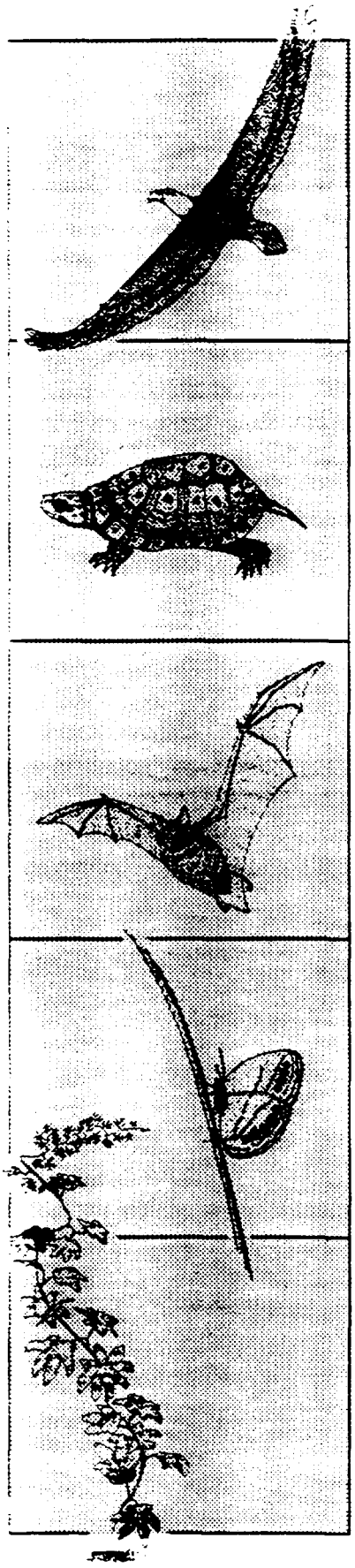
ROYAL BLUEPRINT COMPANY

APPENDIX B

INDIANA'S RARE PLANTS AND ANIMALS: A CHECKLIST OF ENDANGERED AND THREATENED SPECIES

PREPARED BY INDIANA DEPARTMENT OF NATURAL RESOURCES (IDNR, 1993)

INDIANA'S RARE PLANTS AND ANIMALS



A Checklist of Endangered and Threatened Species

1993

INDIANA DEPARTMENT OF NATURAL RESOURCES

Indiana's Rare Plants and Animals

CHECKLIST OF ENDANGERED & THREATENED SPECIES

This publication was developed to provide a checklist of rare plants and animals in Indiana. The director of the Indiana Department of Natural Resources has the legislative authority for the conservation of endangered natural resources in Indiana. The Division of Fish and Wildlife and the Division of Nature Preserves are responsible for the conservation of animals and plants, respectively, and each agency has developed the lists included in this publication. These lists are organized by the degree of endangerment within each major taxonomic group. Animals are listed in taxonomic order and plants are listed in alphabetical order by scientific name within each category of state classification.

Indiana Classification and Protection

Vertebrates, mollusks, and crustaceans classified as endangered or threatened in Indiana are protected from "taking" pursuant to the Nongame and Endangered Species Act of 1973 (Indiana Code 14-2-8.5) and Fish and Wildlife Administrative Rules (310 IAC 3.1-2-7). Plants are protected by the Nature Preserves Act (Indiana Code 14-4-5) which prohibits the collecting of plants occurring on dedicated Nature Preserves. Plants are also afforded protection by the IDNR General Property Rules (310 IAC 5-1-4,9) which prohibit the picking or molesting of trees, shrubs, vines or flowers occurring on Nature Preserves, Museum and Historic Sites, Wetland Conservation Areas, Wildlife Habitat Trust Areas, and lands owned, licensed and leased to the IDNR. State parks, state forests and state reservoir properties provide protection under 310 IAC 5-1-9, paragraph d.

Federal Classification and Protection

Species are classified as federally endangered or threatened pursuant to the Endangered Species Act of 1973 (Public Law 93-205 as amended) and are listed under 50 CFR 17.11 for animals and 17.12 for plants (August 29, 1992). This act prohibits the "taking" of animals listed as endangered or threatened. Federally listed plants are protected when federal funding or permits are required. The federal government also maintains a Notice of Review for Plants and Animals (Federal Register November 21, 1991). The following lists include those species that are formally listed as endangered or threatened, as well as those species that are either in the process of being listed (Category 1) as endangered or threatened, or under review for listing (Category 2).

This is not intended to be a complete listing of all restrictions applied to the protection of endangered or threatened plants and animals. Please contact the appropriate agency listed on the last page for more specific information.

Interested persons can also refer to the Indiana Register, Volume 15, Number 7, April 1, 1992 (Nonrule Policy Document, Information Bulletin #2) for a corresponding list.

DEFINITIONS

Federal Classifications

Endangered — Any species that is in danger of extinction throughout all or a significant portion of its range (Denoted by E on state list).

Threatened — Any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. (Denoted by T on state list).

Notice of Review — Any species currently under review or proposed for listing as Endangered or Threatened. (Denoted by * on state list).

Indiana Classifications

Endangered — Any animal species whose prospects for survival or recruitment within the state are in immediate jeopardy and are in danger of disappearing from the state. This includes all species classified as endangered by the federal government which occur in Indiana.* Plants known to occur currently on five or fewer sites in the state are considered endangered.

Threatened — Any animal species likely to become endangered within the foreseeable future. This includes all species classified as threatened by the federal government which occur in Indiana.* Plants known to occur currently on from six to ten sites are considered threatened.

Rare — Plants and insects known to occur currently on from 11 to 20 sites.

Special Concern — Any animal species about which some problems of limited abundance or distribution in Indiana are known or suspected and should be closely monitored. (Note: Plants in this category have not been included in this listing.)

Extirpated — Any animal species that has been absent from Indiana as a naturally occurring breeding population for more than 15 years. Extirpated plant species are those believed to be originally native to Indiana but without any currently known populations within the state.

*State listings may be more restrictive than those designated by the Federal government.

SCIENTIFIC AUTHORITIES USED

Most scientific and common names used follow the scientific authorities listed below:

Mammals

Jones, J.K. Jr., R.S. Hoffman, D.W. Rice, C. Jones, R.J. Baker, and M.D. Engstrom. 1992. Revised Checklist of North American Mammals North of Mexico, 1991. Occas. Pap., Texas Tech. Univ., No. 146, 23 pp.

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Robins, C.R., R.M. Bailey, C.E. Bond, J.R. Brooker, E.A. Lachner, R.N. Lea, and W.B. Scott. 1980. A List of the Common and Scientific Names of Fishes from the United States and Canada. 4th Ed. American Fisheries Society, Special Publication 12.

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Miller, L.D. and F.M. Brown. 1981. A Catalogue/Checklist of the Butterflies of America North of Mexico. Mem. Lepid. Soc. No. 2.

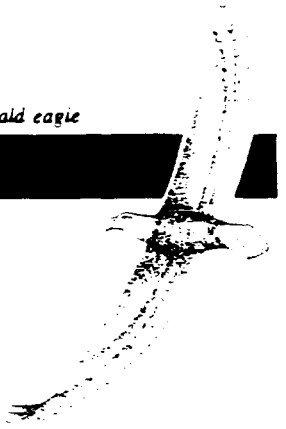
Plants

Gleason, H.A. and A. Cronquist. 1991. Manual of Vascular Plants of Northeastern United States and Adjacent Canada. Second Edition. New York Botanical Garden, Bronx, NY.

Indiana bat

MAMMALS

Scientific Name	Common Name	
Endangered		
Myotis austroriparius	Southeastern myotis	*
Myotis grisescens	Gray myotis	E
Myotis sodalis	Indiana or social myotis	E
Nycticeius humeralis	Evening bat	
Sylvilagus aquaticus	Swamp rabbit	
Lynx rufus	Bobcat	
Threatened		
Spermophilus franklinii	Franklin's ground squirrel	
Neotoma floridana	Eastern woodrat	*
Taxidea taxus	American badger	
Special Concern		
Sorex fumeus	Smoky shrew	
Sorex hoyi	Pygmy shrew	
Condylura cristata	Star-nosed mole	
Plecotus rafinesquii	Rafinesque's big-eared bat	*
Geomys bursarius	Plains pocket gopher	
Reithrodontomys megalotis	Western harvest mouse	
Mustela nivalis	Least weasel	
Extirpated		
Rattus rattus	Black rat	
Erethizon dorsatum	Common porcupine	
Canis lupus	Gray wolf	E
Canis rufus	Red wolf	E
Ursus americanus	Black bear	
Martes pennanti	Fisher	
Gulo gulo	Wolverine	*
Spilogale putorius	Eastern spotted skunk	
Lutra canadensis	Northern river otter	
Felis concolor	Mountain lion	E
Lynx lynx	Lynx	*
Cervus elaphus	Wapiti or elk	
Bos bison	American bison	



Bald eagle

BIRDS

Scientific Name	Common Name	
Endangered		
Botaurus lentiginosus	American bittern	
Casmerodius albus	Great egret	
Nycticorax nycticorax	Black-crowned night-heron	
Nyctanassa violacea	Yellow-crowned night-heron	
Pandion haliaetus	Osprey	
Haliaeetus leucocephalus	Bald eagle	E
Circus cyaneus	Northern harrier	
Falco peregrinus	Peregrine falcon	E
Rallus elegans	King rail	
Charadrius melodus	Piping plover	E
Bartramia longicauda	Upland sandpiper	
Sterna antillarum athalassos	Interior least tern	E
Chlidonias niger	Black tern	*
Tyto alba	Barn owl	
Asio flammeus	Short-eared owl	
Thryomanes bewickii	Bewick's wren	
Lanius ludovicianus	Loggerhead shrike	*
Vermivora chrysoptera	Golden-winged warbler	
Dendroica kirtlandii	Kirtland's warbler	E
Aimophila aestivalis	Bachman's sparrow	*
Threatened		
Grus canadensis	Sandhill crane	
Cistothorus platensis	Sedge wren	
Ammodramus henslowii	Henslow's sparrow	*
Xanthocephalus xanthocephalus	Yellow-headed blackbird	
Special Concern		
Ixobrychus exilis	Least bittern	
Accipiter striatus	Sharp-shinned hawk	
Buteo lineatus	Red-shouldered hawk	
Buteo platypterus	Broad-winged hawk	
Rallus limicola	Virginia rail	
Cistothorus palustris	Marsh wren	
Dendroica cerulea	Cerulean warbler	*
Mniotilta varia	Black-and-white warbler	
Helmitheros vermivorus	Worm-eating warbler	
Wilsonia citrina	Hooded warbler	
Wilsonia canadensis	Canada warbler	
Sturnella neglecta	Western meadowlark	

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Bald eagle

BIRDS

Scientific Name	Common Name	
Extirpated		
Gavia immer	Common loon	
Phalacrocorax auritus	Double-crested cormorant	
Cygnus buccinator	Trumpeter swan	E
Tympanuchus cupido	Greater prairie-chicken	
Phalaropus tricolor	Wilson's phalarope	
Sterna hirundo	Common tern	*
Sterna forsteri	Forster's tern	
Corvus corax	Common raven	
Euphagus cyanocephalus	Brewer's blackbird	

Spotted turtle

REPTILES

Scientific Name	Common Name	
Endangered		
Macroclemys temminckii	Alligator snapping turtle	*
Pseudemys concinna hieroglyphica	Hieroglyphic river cooter	
Threatened		
Clemmys guttata	Spotted turtle	
Kinosternon subrubrum subrubum	Eastern mud turtle	
Cemophora coccinea copei	Northern scarlet snake	
Clonophis kirtlandii	Kirtland's snake	*
Nerodia erythrogaster neglecta	Copperbelly water snake	*
Opheodrys vernalis	Smooth green snake	
Tantilla coronata	Southeastern crowned snake	
Thamnophis butleri	Butler's garter snake	
Agkistrodon piscivorus leucostoma	Western cottonmouth	
Crotalus horridus	Timber rattlesnake	
Sistrurus catenatus catenatus	Eastern massasauga	*
Special Concern		
Emydoidea blandingii	Blanding's turtle	*
Terrapene ornata	Ornate box turtle	
Opheodrys aestivus	Rough green snake	
Thamnophis proximus	Western ribbon snake	
Extirpated		
Farancia abacura reinwardtii	Western mud snake	

Northern red salamander

AMPHIBIANS

Scientific Name	Common Name
Endangered	
Cryptobranchus alleganiensis alleganiensis	Hellbender
Pseudotriton ruber ruber	Northern red salamander
Threatened	
Hemidactylium scutatum	Four-toed salamander
Rana areolata circulosa	Northern crawfish frog
Special Concern	
Ambystoma lateraie	Blue-spotted salamander
Necturus maculosus	Mudpuppy
Scaphiopus holbrookii holbrookii	Eastern spadefoot
Rana blairi	Plains leopard frog
Rana pipiens	Northern leopard frog

Spotted darter

FISH

Scientific Name	Common Name	
Endangered		
Acipenser fulvescens	Lake sturgeon	*
Clinostomus elongatus	Redside dace	
Notropis ariommus	Popeye shiner	
Amblyopsis spelaea	Northern cavefish	*
Typhlichthys subterraneus	Southern cavefish	
Etheostoma camurum	Bluebreast darter	
Etheostoma histrio	Harlequin darter	
Etheostoma maculatum	Spotted darter	
Etheostoma squamiceps	Spottail darter	
Etheostoma tippecanoe	Tippecanoe darter	
Etheostoma variatum	Variegate darter	
Percina evides	Gilt darter	
Threatened		
No Species Listed		
Special Concern		
Coregonus artedi	Cisco	
Cycleptus elongatus	Blue sucker	*
Moxostoma carinatum	River redhorse	
Moxostoma valenciennesi	Greater redhorse	
Fundulus catenatus	Northern studfish	
Ammocrypta pellucida	Eastern sand darter	*
Extirpated		
Alosa alabamae	Alabama shad	
Coregonus nigripinnis	Blackfin cisco	
Coregonus reighardi	Shortnose cisco	*
Esox masquinongy ohioensis	Ohio river muskellunge	
Lagochila lacera	Harelip sucker	
Lepomis symmetricus	Bantam sunfish	
Crystallaria asperella	Crystal darter	*
Percina uranidea	Stargazing darter	*

Fat pocketbook

MOLLUSKS

Scientific Name	Common Name	
Endangered		
Quadrula cylindrica cylindrica	Rabbitsfoot	
Fusconaia subrotunda	Long-solid	
Plethobasus cyphyus	Sheepnose	
Plethobasus cicatricosus	White wartyback	E
Plethobasus cooperianus	Orange-foot pimpleback	E
Pleurobema clava	Clubshell	E
Pleurobema plenum	Rough pigtoe	E
Pleurobema pyramidatum	Pyramid pigtoe	*
Cyprogenia stegaria	Eastern fanshell pearlymussel	E
Potamilus capax	Fat pocketbook	E
Lampsilis abrupta	Pink mucket	E
Epioblasma triquetra	Snuffbox	*
Epioblasma obliquata perobliqua	White cat's paw pearlymussel	E
Epioblasma torulosa torulosa	Tubercled blossom	E
Epioblasma torulosa rangiana	Northern riffleshell	E
Threatened		
No Species Listed		
Special Concern		
Pleurobema cordatum	Ohio pigtoe	
Simpsonaias ambigua	Salamander mussel	*
Ptychobranchus fasciolaris	Kidneyshell	
Obovaria subrotunda	Round hickorynut	
Toxolasma lividum	Purple lilliput	*
Venustaconcha ellipsiformis	Ellipse	
Villosa fabalis	Rayed bean	*
Villosa lienosa	Little spectaclecase	
Lampsilis fasciola	Wavy-rayed lampmussel	
Campeloma decisum	Pointed campeloma	
Lymnaea stagnalis	Swamp lymnaea	
Orconectes indianensis	Indiana crayfish	*
Extirpated		
Cumberlandia monodonta	Spectaclecase	*
Quadrula fragosa	Winged mapleleaf	E
Hemistena lata	Cracking pearlymussel	E
Obovaria retusa	Ring pink	E
Leptodea leptodon	Scaleshell	*
Epioblasma obliquata obliquata	Purple catspaw	E

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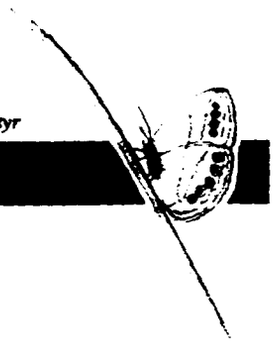
MOLLUSKS

Scientific Name	Common Name
Extirpated cont.	
Epioblasma flexuosa	Leafshell
Epioblasma personata	Round combshell
Epioblasma propinqua	Tennessee riffleshell
Epioblasma sampsonii	Wabash riffleshell



Mitchell's satyr

INSECTS

Scientific Name	Common Name	
Endangered		
Cicindela marginipennis	Cobblestone tiger beetle	*
Lissobiops serpentinus	A rove beetle	
Homoeoneuria ammophila	A sand-filtering mayfly	
Pseudiron centralis	A mayfly	
Anepeorus simplex	A flat-headed mayfly	
Epeorus namatus	A mayfly	
Raptoheptagenia cruentata	A flatheaded mayfly	
Erynnis persius persius	Persius duskywing	
Hesperia ottoe	Ottoe skipper	
Artogeia napi oleracea	Veined white	
Glaucopsyche lygdamus couperi	Silvery blue	
Lycaeides melissa samuelis	Karner blue butterfly	E
Speyeria idalia	Regal fritillary	*
Satyrodes appalachia	Appalachian brown	
Neonympha mitchellii	Mitchell's satyr	E
Merope tuber	Earwig scorpionfly	
Homoplectra doringa	A homoplectran caddisfly	
Setodes oligius	A caddisfly	
Pycnopsyche rossi	A northern casemaker caddisfly	
Goera stylata	A northern casemaker caddisfly	
Threatened		
Erynnis martialis	Mottled duskywing	
Hesperia metea	Cobweb skipper	
Atrytonopsis hianna	Dusted skipper	
Euchloe olympia	Olympia marblewing	
Eosphoropteryx thyatyroides	Pinkpatched looper moth	
Lytrosis permagnaria	A lytrosis moth	
Hyperaeschra tortuosa	A prominent moth	
Rare		
Ochthebius putnamensis	Indiana ochthebius minute moss beetle	*
Dynastes tityus	Unicorn beetle	
Hesperia leonardus	Leonardus skipper	
Hesperia sassacus	Indian skipper	
Problema byssus	Bunchgrass skipper	
Poanes viator viator	Broad-winged skipper	
Euphyes dukesi	Scarce swamp skipper	
Euphyes bimacula	Two-spotted skipper	
Artogeia virginiensis	West virginia white	

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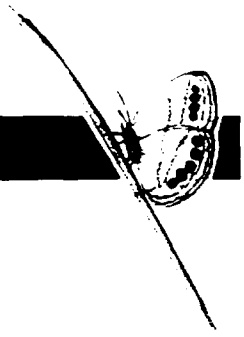

Mitchell's satyr

INSECTS

Scientific Name	Common Name	
Rare cont.		
Incisalia polios	Hoary elfin	
Incisalia irus	Frosted elfin	
Calephelis muticum	Swamp metalmark	
Charidryas harrisii	Harris' checkerspot	
Phyciodes batesii	Tawny crescentspot	*
Cyllopsis gemma	Gemmed satyr	
Pyreferra ceromatica	Annointed sallow moth	*
Archilestes grandis	Great spreadwing	
Nectopsyche pavida	A longhorned casemaker caddisfly	
Ceraclea spp.	A sponge-feeding caddisfly	
Climacia spp.	A spongilla fly	
Sisyra spp.	A spongilla fly	
Extirpated		
Nicrophorus americanus	American burying beetle	E
Pentagenia robusta	Robust pentagenia burrowing mayfly	
Oarisma poweshiek	Poweshiek skipper	
Epidemia epixanthe	Bog copper	
Enodia creola	Creole pearly eye	
Papaipema eryngii	Rattlesnake-master borer moth	*
Schinia indiana	Phlox moth	*
Polystoechetes punctatus	A giant lacewing	
Somatochlora hineana	Ohio emerald dragonfly	*

Climbing fern

VASCULAR PLANTS

Scientific Name	Common Name	Family
Endangered		
Aconitum uncinatum	Blue monkshood	Ranunculaceae
Agalinis auriculata	Earleaf foxglove	Scrophulariaceae
Amelanchier humilis	Running serviceberry	Rosaceae
Arabis drummondii	Drummond rockcress	Brassicaceae
Arabis missouriensis var *deamii*	Missouri rockcress	Brassicaceae
Arabis patens	Spreading rockcress	Brassicaceae
Aralia hispida	Bristly sarsaparilla	Araliaceae
Arenaria patula	Pitcher's stitchwort	Caryophyllaceae
Armoracia aquatica	Lake cress	Brassicaceae
Asplenium bradleyi	Bradley's spleenwort	Aspleniaceae
Asplenium montanum	Mountain spleenwort	Aspleniaceae
Asplenium resiliens	Black-stem spleenwort	Aspleniaceae
Bacopa rotundifolia	Roundleaf water-hyssop	Scrophulariaceae
Berberis canadensis	American barberry	Berberidaceae
Besseya bullii	Kitten tails	Scrophulariaceae
Bidens beckii	Beck water-marigold	Asteraceae
Botrychium simplex	Least grape-fern	Ophioglossaceae
Buchnera americana	Bluehearts	Scrophulariaceae
Calla palustris	Wild calla	Araceae
Camassia angusta	Wild hyacinth	Liliaceae
Carex alopecoidea	Foxtail sedge	Cyperaceae
Carex arctata	Black sedge	Cyperaceae
Carex atherodes	Awned sedge	Cyperaceae
Carex atlantica ssp *capillacea*	Howe sedge	Cyperaceae
Carex brunnescens	Brownish sedge	Cyperaceae
Carex bushii	Bush's sedge	Cyperaceae
Carex chordorrhiza	Creeping sedge	Cyperaceae
Carex conoidea	Field sedge	Cyperaceae
Carex disperma	Softleaf sedge	Cyperaceae
Carex echinata	Little prickly sedge	Cyperaceae
Carex folliculata	Long sedge	Cyperaceae
Carex gigantea	Large sedge	Cyperaceae
Carex gravida	Heavy sedge	Cyperaceae
Carex leptonervia	Finely-nerved sedge	Cyperaceae
Carex limosa	Mud sedge	Cyperaceae
Carex pseudocyperus	Cyperus-like sedge	Cyperaceae
Carex retrorsa	Retrorse sedge	Cyperaceae
Carex richardsonii	Richardson sedge	Cyperaceae
Carex scabrata	Rough sedge	Cyperaceae
Carya texana	Black hickory	Juglandaceae

(continued next page)

Climbing fern

VASCULAR PLANTS

Scientific Name	Common Name	Family
Endangered cont.		
Chaerophyllum procumbens var *shortii*	Wild chervil	Apiaceae
Chamaelirium luteum	Devil's-bit	Liliaceae
Cimicifuga rubifolia	Appalachian bugbane	Ranunculaceae *
Cirsium hillii	Hill's thistle	Asteraceae *
Clintonia borealis	Clinton lily	Liliaceae
Conioselinum chinense	Hemlock parsley	Apiaceae
Cornus amomum ssp *amomum*	Silky dogwood	Cornaceae
Cornus canadensis	Bunchberry	Cornaceae
Corydalis sempervirens	Pale corydalis	Papaveraceae
Crataegus arborea	A hawthorn	Rosaceae
Crataegus biltmoreana	Biltmore hawthorn	Rosaceae
Crataegus chrysocarpa	Fineberry hawthorn	Rosaceae
Crataegus grandis	Grand hawthorn	Rosaceae
Crataegus kelloggii	Kellogg hawthorn	Rosaceae
Crataegus prona	Illinois hawthorn	Rosaceae
Crotonopsis elliptica	Elliptical rushfoil	Euphorbiaceae
Cyperus acuminatus	Short-point flatsedge	Cyperaceae
Cyperus dentatus	Toothed sedge	Cyperaceae
Cypripedium x *andrewsii*	Andrew's lady's-slipper	Orchidaceae
Dentaria multifida	Divided toothwort	Brassicaceae
Dicliptera brachiata	Wild mudwort	Acanthaceae
Eleocharis equisetoides	Horse-tail spikerush	Cyperaceae
Eleocharis microcarpa	Small-fruited spike-rush	Cyperaceae
Epilobium angustifolium	Fireweed	Onagraceae
Epilobium ciliatum	Hairy willow-herb	Onagraceae
Equisetum variegatum	Variegated horsetail	Equisetaceae
Eriocaulon septangulare	Pipewort	Eriocaulaceae
Eupatorium album	White thoroughwort	Asteraceae
Festuca paradoxa	Cluster fescue	Poaceae
Fimbristylis caroliniana	Carolina fimbry	Cyperaceae
Gentiana villosa	Striped gentian	Gentianaceae
Geranium bicknellii	Bicknell northern crane's-bill	Geraniaceae
Gerardia skinneriana	Pale false foxglove	Scrophulariaceae *
Geum rivale	Purple avens	Rosaceae
Gleditsia aquatica	Water-locust	Fabaceae
Glyceria acutiflora	Sharp-scaled manna-grass	Poaceae
Glyceria borealis	Small floating manna-grass	Poaceae
Hibiscus lasiocarpus	Hairy-fruited hibiscus	Malvaceae
Hydrocotyle americana	American water-pennywort	Apiaceae
Hypericum adpressum	Creeping St. John's-wort	Clusiaceae

continued next page

Climbing fern

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Endangered cont.			
Hypericum pyramidatum	Great St. John's-wort	Clusiaceae	
Iliamna remota	Kankakee globe-mallow	Malvaceae	*
Isoetes engelmannii	Appalachian quillwort	Isoetaceae	
Isoetes melanopoda	Blackfoot quillwort	Isoetaceae	
Itea virginica	Virginia willow	Saxifragaceae	
Juncus articulatus	Jointed rush	Juncaceae	
Juncus secundus	Secund rush	Juncaceae	
Lathyrus maritimus var *glaber*	Beach peavine	Fabaceae	
Leavenworthia uniflora	Michaux's leavenworthia	Brassicaceae	
Lechea racemulosa	Illinois pinweed	Cistaceae	
Lemna minima	Least duckweed	Lemnaceae	
Leptochloa panicoides	Amazon sprangle-top	Poaceae	
Lesquerella globosa	Lesquereux's mustard	Brassicaceae	*
Ligusticum canadense	Nondo lovage	Apiaceae	
Linum intercursum	Sandplain flax	Linaceae	
Lithospermum incisum	Narrow-leaved puccoon	Boraginaceae	
Ludwigia sphaerocarpa	Globe-fruited false-loosestrife	Onagraceae	
Luzula acuminata	Hairy woodrush	Juncaceae	
Lycopodium appressum	Southern bog clubmoss	Lycopodiaceae	
Lycopodium dendroideum	Treelike clubmoss	Lycopodiaceae	
Lycopodium inundatum	Northern bog clubmoss	Lycopodiaceae	
Lycopus amplectens	Sessile-leaved bugleweed	Lamiaceae	
Lygodium palmatum	Climbing fern	Schizaeaceae	
Magnolia acuminata	Cucumber magnolia	Magnoliaceae	
Magnolia tripetala	Umbrella magnolia	Magnoliaceae	
Malaxis unifolia	Green adder's-mouth	Orchidaceae	
Melanthium virginicum	Virginia bunchflower	Liliaceae	
Mikania scandens	Climbing hempweed	Asteraceae	
Monarda bradburiana	Eastern bee-balm	Lamiaceae	
Muhlenbergia capillaris	Long-awn hairgrass	Poaceae	
Muhlenbergia cuspicata	Plains muhlenbergia	Poaceae	
Myosotis laxa	Smaller forget-me-not	Boraginaceae	
Myriophyllum pinnatum	Cutleaf water-milfoil	Haloragaceae	
Najas gracillima	Thread-like naiad	Najadaceae	
Onosmodium hispidissimum	Shaggy false-gromwell	Boraginaceae	
Orobanche fasciculata	Clustered broomrape	Orobanchaceae	
Oryzopsis asperifolia	White-grained mountain-ricegrass	Poaceae	
Pachysandra procumbens	Allegheny spurge	Buxaceae	
Panicum annulum	A panic-grass	Poaceae	
Panicum bicknellii	A panic-grass	Poaceae	

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Climbing fern

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Endangered cont.			
Panicum columbianum	Hemlock panic-grass	Poaceae	
Panicum scoparium	Broom panic-grass	Poaceae	
Perideridia americana	Eastern eulophus	Apiaceae	
Phacelia ranunculacea	Blue scorpion-weed	Hydrophyllaceae	*
Phlox bifida ssp *stellaria*	Cleft phlox	Polemoniaceae	
Plantago cordata	Heart-leaved plantain	Plantaginaceae	
Platanthera ciliaris	Yellow-fringe orchis	Orchidaceae	
Platanthera dilatata	Leafy white orchis	Orchidaceae	
Platanthera flava var *flava*	Southern rein orchid	Orchidaceae	
Polygala incarnata	Pink milkwort	Polygalaceae	
Polygala paucifolia	Gay-wing milkwort	Polygalaceae	
Polygonum cilinode	Fringed black bindweed	Polygonaceae	
Polygonum hydropiperoides var *setaceum*	Swamp smartweed	Polygonaceae	
Polytaenia nuttallii	Prairie parsley	Apiaceae	
Potamogeton epihydrus	Nuttall pondweed	Potamogetonaceae	
Potamogeton friesii	Fries' pondweed	Potamogetonaceae	
Potamogeton oakesianus	Oakes pondweed	Potamogetonaceae	
Potamogeton praelongus	White-stem pondweed	Potamogetonaceae	
Potamogeton pulcher	Spotted pondweed	Potamogetonaceae	
Potamogeton strictifolius	Straight-leaf pondweed	Potamogetonaceae	
Potamogeton vaseyi	Vasey's pondweed	Potamogetonaceae	
Pyrola asarifolia	Pink wintergreen	Ericaceae	
Quercus prinoides	Dwarf chinquapin oak	Fagaceae	
Ranunculus harveyi	Harvey's buttercup	Ranunculaceae	
Ranunculus laxicaulis	Mississippi buttercup	Ranunculaceae	
Ranunculus pusillus	Pursh buttercup	Ranunculaceae	
Rhexia mariana var *mariana*	Maryland meadow beauty	Melastomataceae	
Rhynchospora globularis var *recognita*	Globe beaked-rush	Cyperaceae	
Rubus centralis	Illinois blackberry	Rosaceae	
Rubus enslenii	Southern dewberry	Rosaceae	
Rudbeckia fulgida var *umbrosa*	Coneflower	Asteraceae	
Sanguisorba canadensis	Canada burnet	Rosaceae	
Satureja glabella var *angustifolia*	Calamint	Lamiaceae	
Saxifraga forbesii	Forbes saxifrage	Saxifragaceae	
Scheuchzeria palustris ssp *americana*	American scheuchzeria	Scheuchzeriaceae	
Schizachne purpurascens	Purple oat	Poaceae	*
Scirpus hallii	Hall's bulrush	Cyperaceae	
Scirpus purshianus	Weakstalk bulrush	Cyperaceae	
Scirpus smithii	Smith's bulrush	Cyperaceae	
Scirpus torreyi	Torrey's bulrush	Cyperaceae	*

(continued next page)

Purple flowering raspberry

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Endangered cont.			
Scutellaria saxatilis	Rock skullcap	Lamiaceae	
Selaginella apoda	Meadow spike-moss	Selaginellaceae	
Setaria geniculata	Bristly foxtail	Poaceae	
Sida hermaphrodita	Virginia mallow	Malvaceae	
Sisyrinchium montanum	Strict blue-eyed-grass	Iridaceae	
Solidago squarrosa	Stout-ragged goldenrod	Asteraceae	
Spigelia marilandica	Woodland pinkroot	Loganiaceae	
Spiranthes magnicamporum	Great plains ladies'-tresses	Orchidaceae	
Spiranthes romanzoffiana	Hooded ladies'-tresses	Orchidaceae	
Stenanthium gramineum	Eastern featherbells	Liliaceae	
Styrax grandifolius	Large-leaf snowbell	Styracaceae	
Thuja occidentalis	Northern white cedar	Cupressaceae	
Trichomanes boschianum	Filmy fern	Hymenophyllaceae	
Trifolium reflexum var *glabrum*	Buffalo clover	Fabaceae	
Trifolium stoloniferum	Running buffalo clover	Fabaceae	E
Trillium cernuum var *macranthum*	Nodding trillium	Liliaceae	
Utricularia geminiscapa	Hidden-fruited bladderwort	Lentibulariaceae	
Utricularia minor	Lesser bladderwort	Lentibulariaceae	
Utricularia radiata	Small swollen bladderwort	Lentibulariaceae	
Uvularia perfoliata	Bellwort	Liliaceae	
Vaccinium myrtilloides	Velvetleaf blueberry	Ericaceae	
Valeriana edulis	Hairy valerian	Valerianaceae	
Valeriana uliginosa	Marsh valerian	Valerianaceae	
Valerianella chenopodiifolia	Goose-foot corn-salad	Valerianaceae	
Viburnum cassinoides	Northern wild-raisin	Caprifoliaceae	
Viburnum opulus var *americanum*	Highbush-cranberry	Caprifoliaceae	
Viola egglestonii	Eggleston's violet	Violaceae	
Vitis rupestris	Sand grape	Vitaceae	
Zannichellia palustris	Horned pondweed	Zannichelliaceae	
Threatened			
Acalypha deamii	Mercury	Euphorbiaceae	
Actaea rubra	Red baneberry	Ranunculaceae	
Androsace occidentalis	Western rockjasmine	Primulaceae	
Arabis glabra	Tower-mustard	Brassicaceae	
Asplenium ruta-muraria	Wallrue spleenwort	Aspleniaceae	
Aster furcatus	Forked aster	Asteraceae	*
Azolla caroliniana	Carolina mosquito-fern	Azollaceae	
Baptisia australis	Wild false indigo	Fabaceae	
Botrychium matricariifolium	Chamomile grape-fern	Ophioglossaceae	

(continued next page)

Purple flowering raspberry

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Threatened cont.			
Calycocarpum lyonii	Cup-seed	Menispermaceae	
Carex atlantica ssp *atlantica*	Atlantic sedge	Cyperaceae	
Carex bebbii	Bebb's sedge	Cyperaceae	
Carex crawei	Crawe sedge	Cyperaceae	
Carex cumulata	Clustered sedge	Cyperaceae	
Carex debilis var *rudgei*	White-edge sedge	Cyperaceae	
Carex decomposita	Cypress-knee sedge	Cyperaceae	
Carex flava	Yellow sedge	Cyperaceae	
Carex garberi	Elk sedge	Cyperaceae	
Carex sparganioides var *cephaloidea*	Thinleaf sedge	Cyperaceae	
Carex straminea	Straw sedge	Cyperaceae	
Carya pallida	Sand hickory	Juglandaceae	
Chimaphila umbellata ssp *cisatlantica*	Common wintergreen	Ericaceae	
Chrysopsis villosa	Hairy golden-aster	Asteraceae	
Chrysosplenium americanum	American golden-saxifrage	Saxifragaceae	
Cirsium pitcheri	Dune thistle	Asteraceae	T
Cladrastis lutea	Yellowwood	Fabaceae	
Coeloglossum viride var *virescens*	Long-bract green orchis	Orchidaceae	
Crataegus pedicellata	Scarlet hawthorn	Rosaceae	
Crataegus viridis	Green hawthorn	Rosaceae	
Diodia virginiana	Buttonweed	Rubiaceae	
Eleocharis geniculata	Capitate spike-rush	Cyperaceae	
Eleocharis melanocarpa	Black-fruited spike-rush	Cyperaceae	
Eleocharis wolfii	Wolf spikerush	Cyperaceae	*
Eriophorum gracile	Slender cotton-grass	Cyperaceae	
Erysimum capitatum	Prairie-rocket wallflower	Brassicaceae	
Eupatorium incarnatum	Pink thoroughwort	Asteraceae	
Fuirena pumila	Dwarf umbrella-sedge	Cyperaceae	
Gaura filipes	Slender-stalked gaura	Onagraceae	
Gentiana puberulenta	Downy gentian	Gentianaceae	
Geranium robertianum	Herb-robert	Geraniaceae	
Heliotropium tenellum	Slender heliotrope	Boraginaceae	
Hottonia inflata	Featherfoil	Primulaceae	
Hudsonia tomentosa	Sand-heather	Cistaceae	
Hypericum denticulatum	Coppery St. John's-wort	Clusiaceae	
Iresine rhizomatosa	Eastern bloodleaf	Amaranthaceae	
Juncus pelocarpus	Brown-fruited rush	Juncaceae	
Juncus scirpoides	Scirpus-like rush	Juncaceae	
Krigia oppositifolia	Dwarf dandelion	Asteraceae	
Lathyrus venosus	Smooth veiny pea	Fabaceae	

(continued next page)

Purple flowering raspberry

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Threatened cont.			
Liatris pycnostachya	Cattail gay-feather	Asteraceae	
Linum striatum	Ridged yellow flax	Linaceae	
Ludwigia glandulosa	Cylindric-fruited seedbox	Onagraceae	
Lycopodium obscurum	Tree clubmoss	Lycopodiaceae	
Lycopodium tristachyum	Deep-root clubmoss	Lycopodiaceae	
Melica nitens	Three-flower melic grass	Poaceae	
Myriophyllum verticillatum	Whorled water-milfoil	Haloragaceae	
Napaea dioica	Glade mallow	Malvaceae	*
Oenothera perennis	Small sundrops	Onagraceae	
Orobanche ludoviciana	Louisiana broomrape	Orobancnaceae	
Oryzopsis racemosa	Black-fruit mountain-ricegrass	Poaceae	
Oxydendrum arboreum	Sourwood	Ericaceae	
Panicum leibergii	Leiberg's witchgrass	Poaceae	
Panicum verrucosum	Warty panic-grass	Poaceae	
Panicum yadkinense	A panic-grass	Poaceae	
Penstemon canescens	Gray beardtongue	Scrophulariaceae	
Phlox amplifolia	Large-leaved phlox	Polemoniaceae	
Platanthera hyperborea	Leafy northern green orchis	Orchidaceae	
Polygonum careyi	Carey's smartweed	Polygonaceae	
Polygonum hydropiperoides var *opelousanum*	Northeastern smartweed	Polygonaceae	
Potamogeton richardsonii	Redheadgrass	Potamogetonaceae	
Potamogeton robbinsii	Flatleaf pondweed	Potamogetonaceae	
Potentilla anserina	Silverweed	Rosaceae	
Psilocarya scirpoides	Long-beaked baldrush	Cyperaceae	
Rhus aromatica var *arenaria*	Beach sumac	Anacardiaceae	*
Rhynchospora corniculata var *interior*	Short-bristle horned-rush	Cyperaceae	
Rubus odoratus	Purple flowering raspberry	Rosaceae	
Salix cordata	Heartleaf willow	Salicaceae	
Salix serissima	Autumn willow	Salicaceae	
Scleria reticularis	Reticulated nutrush	Cyperaceae	
Sedum telephioides	Allegheny stonecrop	Crassulaceae	
Selaginella rupestris	Ledge spike-moss	Selaginellaceae	
Silene regia	Royal catchfly	Caryophyllaceae	*
Solidago simplex var *gillmanii*	Sticky goldenrod	Asteraceae	*
Sparganium androcladum	Branching bur-reed	Sparganiaceae	
Spiranthes ochroleuca	Yellow nodding ladies'-tresses	Orchidaceae	
Stipa avenacea	Blackseed needlegrass	Poaceae	
Strophostyles leiosperma	Slick-seed wild-bean	Fabaceae	
Sullivantia sullivantii	Sullivantia	Saxifragaceae	
Talinum rugospermum	Prairie fame-flower	Portulacaceae	*

(continued next page)

French's shootingstar

VASCULAR PLANTS

Scientific Name	Common Name	Family
Threatened cont.		
Taxodium distichum	Bald cypress	Taxodiaceae
Taxus canadensis	American yew	Taxaceae
Thalictrum pubescens	Tall meadowrue	Ranunculaceae
Triglochin palustre	Marsh arrow-grass	Scheuchzeriaceae
Utricularia cornuta	Horned bladderwort	Lentibulariaceae
Utricularia subulata	Zigzag bladderwort	Lentibulariaceae
Vaccinium oxycoccos	Small cranberry	Ericaceae
Veronica anagallis-aquatica	Brook-pimpernell	Scrophulariaceae
Viola pedatifida	Prairie violet	Violaceae
Xyris caroliniana	Carolina yellow-eyed grass	Xyridaceae
Rare		
Andromeda glaucophylla	Bog rosemary	Ericaceae
Arctostaphylos uva-ursi	Bearberry	Ericaceae
Arenaria stricta	Michaux's stitchwort	Caryophyllaceae
Aristida intermedia	Slim-spike three-awn grass	Poaceae
Aristida tuberculosa	Seabeach needlegrass	Poaceae
Aster junciformis	Rushlike aster	Asteraceae
Aster oblongifolius	Aromatic aster	Asteraceae
Aster sericeus	Western silvery aster	Asteraceae
Carex aurea	Golden-fruited sedge	Cyperaceae
Carex eburnea	Ebony sedge	Cyperaceae
Carex lupuliformis	False hop sedge	Cyperaceae
Carex pedunculata	Longstalk sedge	Cyperaceae
Carex seorsa	Weak stellate sedge	Cyperaceae
Carex socialis	Social sedge	Cyperaceae
Catalpa speciosa	Northern catalpa	Bignoniaceae
Cheilanthes lanosa	Hairy lipfern	Adiantaceae
Cirsium carolinianum	Carolina thistle	Asteraceae
Clematis pitcheri	Pitcher leather-flower	Ranunculaceae
Cornus rugosa	Roundleaf dogwood	Cornaceae
Crataegus intricata	A hawthorn	Rosaceae
Crataegus succulenta	Fleshy hawthorn	Rosaceae
Cyperus houghtonii	Houghton's nutsedge	Cyperaceae
Cyperus pseudovegetus	Green flatsedge	Cyperaceae
Cypripedium calceolus var *parviflorum*	Small yellow lady's-slipper	Orchidaceae
Cypripedium candidum	Small white lady's-slipper	Orchidaceae
Deschampsia cespitosa	Tufted hairgrass	Poaceae
Didiplis diandra	Water-purslane	Lythraceae
Diervilla lonicera	Northern bush-honeysuckle	Caprifoliaceae

(continued next page)

French's shootingstar

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Rare cont.			
Dodecatheon frenchii	French's shootingstar	Primulaceae	
Drosera intermedia	Spoon-leaved sundew	Droseraceae	
Eleocharis robbinsii	Robbins spikerush	Cyperaceae	
Eriophorum angustifolium	Narrow-leaved cotton-grass	Cyperaceae	
Eriophorum viridicarinatum	Green-keeled cotton-grass	Cyperaceae	
Gentiana alba	Yellow gentian	Gentianaceae	
Gonolobus obliquus	Angle pod	Asclepiadaceae	
Hexalectris spicata	Crested coralroot	Orchidaceae	
Houstonia nigricans	Narrowleaf summer bluets	Rubiaceae	
Hypericum dolabriforme	Straggling St. John's-wort	Clusiaceae	*
Juncus balticus var *littoralis*	Baltic rush	Juncaceae	
Juniperus communis	Ground juniper	Cupressaceae	
Lespedeza x *nuttallii*	Nuttall bushclover	Fabaceae	
Lilium canadense	Canada lily	Liliaceae	
Linum sulcatum	Grooved yellow flax	Linaceae	
Ludwigia decurrens	Primrose willow	Onagraceae	
Lycopodium hickeyi	Hickey's clubmoss	Lycopodiaceae	
Matteuccia struthiopteris	Ostrich fern	Aspleniaceae	
Melampyrum lineare	American cow-wheat	Scrophulariaceae	
Milium effusum	Tall millet-grass	Poaceae	
Nothoscordum bivalve	Crow-poison	Liliaceae	
Ophioglossum engelmannii	Limestone adder's-tongue	Ophioglossaceae	
Oxalis illinoensis	Illinois woodsorrel	Oxalidaceae	
Panax trifolius	Dwarf ginseng	Araliaceae	
Panicum addisonii	Commons' panic-grass	Poaceae	
Panicum boreale	Northern witchgrass	Poaceae	
Panicum deamii	Blood witchgrass	Poaceae	
Panicum tsugetorum	A panic-grass	Poaceae	
Passiflora incarnata	Purple passion-flower	Passifloraceae	
Penstemon deamii	Deam beardtongue	Scrophulariaceae	*
Pinus banksiana	Jack pine	Pinaceae	
Pinus strobus	Eastern white pine	Pinaceae	
Platanthera clavellata	Small green woodland orchis	Orchidaceae	
Platanthera psycodes	Small purple-fringe orchis	Orchidaceae	
Poa alsodes	Grove meadow grass	Poaceae	
Poa wolfii	Wolf bluegrass	Poaceae	
Polygonella articulata	Eastern jointweed	Polygonaceae	
Polypodium polypodioides	Resurrection fern	Polypodiaceae	
Potamogeton pusillus	Slender pondweed	Potamogetonaceae	
Prenanthes aspera	Rough rattlesnake-root	Asteraceae	

(continued next page)

Prairie white-fringed orchid

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Rare cont.			
Prenanthes crepidinea	Nodding rattlesnake root	Asteraceae	
Prunus pensylvanica	Fire cherry	Rosaceae	
Pyrola rotundifolia var *americana*	American wintergreen	Ericaceae	
Rhynchospora macrostachya	Tall beaked-rush	Cyperaceae	
Rudbeckia fulgida var *fulgida*	Orange coneflower	Asteraceae	
Sagittaria australis	Longbeak arrowhead	Alismataceae	
Sanicula smallii	Small's snakeroot	Apiaceae	
Saxifraga virginiensis	Virginia saxifrage	Saxifragaceae	
Scirpus subterminalis	Water bulrush	Cyperaceae	
Scutellaria parvula var *australis*	Southern skullcap	Lamiaceae	
Solidago ptarmicoides	Prairie goldenrod	Asteraceae	
Spiranthes lucida	Shining ladies'-tresses	Orchidaceae	
Spiranthes vernalis	Grassleaf ladies'-tresses	Orchidaceae	
Tofieldia glutinosa	False asphodel	Liliaceae	
Trachelospermum difforme	Climbing dogbane	Apocynaceae	
Tragia cordata	Heart-leaved noseburn	Euphorbiaceae	
Trichostema dichotomum	Forked bluecurl	Lamiaceae	
Utricularia purpurea	Purple bladderwort	Lentibulariaceae	
Viburnum molle	Softleaf arrow-wood	Caprifoliaceae	
Viola primulifolia	Primrose-leaf violet	Violaceae	
Vitis palmata	Catbird grape	Vitaceae	
Vittaria appalachiana	Appalachian vittaria	Adiantaceae	
Waldsteinia fragarioides	Barren strawberry	Rosaceae	
Wisteria macrostachya	Kentucky wisteria	Fabaceae	
Woodwardia areolata	Netted chainfern	Blechnaceae	
Zigadenus elegans var *glaucus*	White camas	Liliaceae	
Zizia aptera	Golden alexanders	Apiaceae	
Extirpated			
Adlumia fungosa	Climbing fumatory	Papaveraceae	
Anemone caroliniana	Carolina anemone	Ranunculaceae	
Arethusa bulbosa	Swamp-pink	Orchidaceae	
Asclepias meadii	Mead's milkweed	Asclepiadaceae	T
Astragalus tennesseensis	Tennessee milk-vetch	Fabaceae	*
Aureolaria grandiflora var *pulchra*	Large-flower false-foxglove	Scrophulariaceae	
Betula populifolia	Gray birch	Betulaceae	
Botrychium multifidum var *intermedium*	Leathery grape-fern	Ophioglossaceae	
Bumelia lycioides	Buckthorn	Sapotaceae	
Cabomba caroliniana	Carolina fanwort	Nymphaeaceae	
Callirhoe triangulata	Clustered poppy-mallow	Malvaceae	

(continued next page)

VASCULAR PLANTS

Scientific Name	Common Name	Family	
Extirpated cont.			
Ceanothus herbaceus	Prairie redroot	Rhamnaceae	
Circaea alpina	Small enchanter's nightshade	Onagraceae	
Conyza canadensis var *pusilla*	Fleabane	Asteraceae	
Corallorrhiza trifida var *verna*	Early coralroot	Orchidaceae	
Cuscuta cuspidata	Cusp dodder	Cuscutaceae	
Dryopteris celsa	Log fern	Aspleniaceae	
Dryopteris clintoniana	Clinton woodfern	Aspleniaceae	
Echinodorus cordifolius	Upright burhead	Alismataceae	
Eriophorum spissum	Dense cotton-grass	Cyperaceae	
Euphorbia obtusata	Bluntleaf spurge	Euphorbiaceae	
Euphorbia serpens	Matted broomspurge	Euphorbiaceae	
Fragaria vesca var *americana*	Woodland strawberry	Rosaceae	
Glyceria grandis	American manna-grass	Poaceae	
Gnaphalium macounii	Winged cudweed	Asteraceae	
Gymnopogon ambiguus	Broadleaf beardgrass	Poaceae	
Hemicarpha micrantha var *aristulata*	Drummond hemicarpha	Cyperaceae	
Hippuris vulgaris	Common mare's-tail	Hippuridaceae	
Hypericum frondosum	Golden St. John's-wort	Clusiaceae	
Juncus militaris	Bayonet rush	Juncaceae	
Lactuca ludoviciana	Western lettuce	Asteraceae	
Lathyrus ochroleucus	Pale vetchling peavine	Fabaceae	
Lechea stricta	Upright pinweed	Cistaceae	
Lemna perpusilla	Minute duckweed	Lemnaceae	
Lemna valdiviana	Pale duckweed	Lemnaceae	
Lespedeza stuevei	Tall bush-clover	Fabaceae	
Linnaea borealis	Twinflower	Caprifoliaceae	
Lonicera canadensis	American fly-honeysuckle	Caprifoliaceae	
Melothria pendula	Creeping cucumber	Cucurbitaceae	
Oenothera triloba	Stemless evening-primrose	Onagraceae	
Oryzopsis pungens	Slender mountain-ricegrass	Poaceae	
Panicum longifolium	Long-leaved panic-grass	Poaceae	
Panicum lucidum	Shining panic-grass	Poaceae	
Panicum mattamuskeetense	A panic-grass	Poaceae	
Panicum subvillosum	A panic-grass	Poaceae	
Penstemon tubaeflorus	Tube penstemon	Scrophulariaceae	
Phlox ovata	Mountain phlox	Polemoniaceae	
Platanthera hookeri	Hooker orchis	Orchidaceae	
Platanthera leucophaea	Prairie white-fringed orchid	Orchidaceae	T
Platanthera orbiculata	Large roundleaf orchid	Orchidaceae	
Poa cuspidata	Bluegrass	Poaceae	

(continued next page)

Prairie white-fringed orchid

VASCULAR PLANTS

Scientific Name	Common Name	Family
Extirpated cont.		
Populus balsamifera	Balsam poplar	Salicaceae
Potamogeton bicupulatus	Snail-seed pondweed	Potamogetonaceae
Proboscidea louisianica	Louisiana unicorn-plant	Pedaliaceae
Psilocarya nitens	Short-beaked bald-rush	Cyperaceae
Psoralea stipulata	A scurf-pea	Fabaceae
Psoralea tenuiflora	Few-flowered scurf-pea	Fabaceae
Pteridium aquilinum var *pseudocaudatum*	Bracken fern	Dennstaedtiaceae
Pyrola secunda	One-sided wintergreen	Ericaceae
Pyrola virens	Greenish-flowered wintergreen	Ericaceae
Rubus alumnus	A bramble	Rosaceae
Rubus deamii	Deam dewberry	Rosaceae
Rubus depavitus	A bramble	Rosaceae
Rubus impar	A bramble	Rosaceae
Sabatia campanulata	Slender marsh pink	Gentianaceae
Scutellaria parvula var *parvula*	Small skullcap	Lamiaceae
Shepherdia canadensis	Canada buffalo-berry	Elaeagnaceae
Solidago buckleyi	Buckley's goldenrod	Asteraceae
Sorbus decora	Northern mountain-ash	Rosaceae
Stachys clingmanii	Clingman hedge-nettle	Lamiaceae
Stipa comata	Sewing needlegrass	Poaceae
Trautvetteria carolinensis	Carolina tassel-rue	Ranunculaceae
Utricularia resupinata	Northeastern bladderwort	Lentibulariaceae
Veronica americana	American speedwell	Scrophulariaceae
Viola hirsutula	Southern wood violet	Violaceae
Wolffiella floridana	Sword bogmat	Lemnaceae

FOR MORE INFORMATION

The Indiana Natural Heritage Protection Campaign is a $10 million effort, funded through a model cooperative relationship between private conservationists, led by The Nature Conservancy, and state government, to protect habitats of the rarest species in Indiana.

The Nongame and Endangered Wildlife Program was established for the protection and conservation of more than 550 species of mammals, birds, reptiles, amphibians, fish and mollusks in Indiana. The program, administered by the Division of Fish and Wildlife, is funded primarily by public donations and contributions to the Nongame Wildlife Fund on the Indiana state income tax form.

The Indiana Natural Heritage Data Center has two major functions: 1) to conduct comprehensive, systematic inventories for Indiana's remaining natural communities and rarest plants; 2) to maintain a database containing information on the rarest plants, animals and natural communities. The Heritage Data Center is located within the Division of Nature Preserves. Maintenance of the computerized database of occurrences of rare plants and animals is a cooperative effort between the Division of Nature Preserves (manager of the database) and the Division of Fish and Wildlife. Observations of any species on this checklist should be reported to the appropriate agency listed below.

— Indiana nongame and endangered wildlife, contact:

Nongame and Endangered Wildlife Program
Division of Fish and Wildlife
402 W. Washington St., Rm. W273
Indianapolis, IN 46204
(317) 232-4080

— Indiana rare plants and natural communities, contact:

Division of Nature Preserves
402 W. Washington St., Rm. W267
Indianapolis, IN 46204
(317) 232-4052

— Federally endangered and threatened species, contact:

Ecological Services Field Office
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 47403
(812) 334-4261

Division of Nature Preserves
402 W. Washington St., Rm. W267
Indianapolis, IN 46204

Division of Fish and Wildlife
402 W. Washington St., Rm. W273
Indianapolis, IN 46204

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APPENDIX C

DATA SUMMARY TABLES

APPENDIX C.1

SURFACE WATER ANALYTICAL DATA

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-5	S-6	S-6	S-8
Sample ID.:		SW-KJJ-110	SW-WP-091	SW-WP-092	SW-WP-093	SW-KJJ-111	SW-WP-002	SW-WP-004	SW-WP-039
Date Sampled:	Units	08/30/94	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	06/04/94	06/04/94
								Dup	
SEMIVOLATILE ORGANIC COMPOUNDS									
1,2,4-TRICHLOROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,2-DICHLOROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,3-DICHLOROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
1,4-DICHLOROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2,4,5-TRICHLOROPHENOL	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
2,4,6-TRICHLOROPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2,4-DICHLOROPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2,4-DIMETHYLPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2,4-DINITROPHENOL	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
2,4-DINITROTOLUENE	UG/L	ND(10)	ND(10)UJ	ND(10)UJ	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)
2,6-DINITROTOLUENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2-CHLORONAPHTHALENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2-CHLOROPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2-METHYLNAPHTHALENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2-METHYLPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
2-NITROANILINE	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
2-NITROPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
3,3'-DICHLOROBENZIDINE	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
3-NITROANILINE	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4,6-DINITRO-O-CRESOL	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-BROMODIPHENYL ETHER	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-CHLORO-3-METHYLPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-CHLOROANILINE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-CHLOROPHENYL-PHENYLETHER	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-METHYLPHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-NITROANILINE	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
4-NITROPHENOL	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
ACENAPHTHENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
ACENAPHTHYLENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
ANTHRACENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BENZ(A)ANTHRACENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BENZO(A)PYRENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BENZO(B)FLUORANTHENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BENZO(G,H,I)PERYLENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BENZO(K)FLUORANTHENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BIS(2-CHLOROETHOXY)METHANE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BIS(2-CHLOROETHYL)ETHER	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BIS(2-CHLOROISOPROPYL)ETHER	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BIS(2-ETHYLHEXYL)PHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
BUTYLBENZYLPHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CARBAZOLE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CHRYSENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
DI-N-BUTYLPHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
DI-N-OCTYLPHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
DIBENZ(A,H)ANTHRACENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-5	S-6	S-6	S 8
Sample ID.:		SW-KJJ-110	SW-WP-091	SW-WP-092	SW-WP-093	SW-KJJ-111	SW-WP-002	SW-WP-004	SW-WP-039
Date Sampled:	Units	08/30/94	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	06/04/94 Dup	06/04/94
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)									
DIBENZOFURAN	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
DIETHYLPHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
DIMETHYLPHTHALATE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
FLUORANTHENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
FLUORENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
HEXACHLOROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
HEXACHLOROBUTADIENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
HEXACHLOROCYCLOPENTADIENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
HEXACHLOROETHANE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
INDENO(1,2,3-CD)PYRENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
ISOPHORONE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
N-NITROSO-DI-N-PROPYLAMINE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
N-NITROSODIPHENYLAMINE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
NAPHTHALENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
NITROBENZENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
PENTACHLOROPHENOL	UG/L	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
PHENANTHRENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
PHENOL	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
PYRENE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
METALS									
ALUMINUM	MG/L	5.8	3.6	4.2	3.1	5.0	1.5	1.6	0.54
ANTIMONY	MG/L	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)
ARSENIC	MG/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.012	0.012	ND(0.0050)
BARIUM	MG/L	0.040	0.034	0.036	0.030	0.039	0.059	0.059	0.019
BERYLLIUM	MG/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
CADMIUM	MG/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
CALCIUM	MG/L	48	46	47	45	48	73	73	29
CHROMIUM	MG/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
COBALT	MG/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
COPPER	MG/L	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)
IRON	MG/L	4.3	3.1	3.5	2.7	4.2	5.1	4.7	1.1
LEAD	MG/L	0.0056	0.0073	0.0036	0.0031	0.0054	0.0058	0.0059	0.0034
MAGNESIUM	MG/L	13	9.9	10	9.7	13	23	23	15
MANGANESE	MG/L	0.061	0.049	0.050	0.050	0.061	1.1	1.1	0.057
MERCURY	MG/L	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00020)	ND(0.00020)	ND(0.00020)
NICKEL	MG/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013 R	0.013 R	0.016
POTASSIUM	MG/L	5.8	5.7	6.2	5.5	5.7	4.4	4.6	2.0
SELENIUM	MG/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
SILVER	MG/L	ND(0.010)	0.013	0.012	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
SODIUM	MG/L	6.8	9.0	9.3	8.9	6.8	33	33	4.5
THALLIUM	MG/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
VANADIUM	MG/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
ZINC	MG/L	0.031	0.041 R	0.045 R	0.042 R	0.034	0.052 R	0.037 R	ND(0.020)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-5	S-6	S-6	S-8
Sample ID.:		SW-KJJ-110	SW-WP-091	SW-WP-092	SW-WP-093	SW-KJJ-111	SW-WP-002	SW-WP-004	SW-WP-039
Date Sampled:	Units	08/30/94	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	06/04/94 Dup	06/04/94
GENERAL CHEMISTRY (cont'd)									
CYANIDE	MG/L	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.01)	ND(0.01)
PESTICIDES AND PCB'S									
4,4'-DDD	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
4,4'-DDE	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
4,4'-DDT	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ALDRIN	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
ALPHA-BHC	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
ALPHA-CHLORDANE	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1016	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1221	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1232	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1242	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1248	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
AROCHLOR 1254	MG/L	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
AROCHLOR 1260	MG/L	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
BETA-BHC	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
DELTA-BHC	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
DIELDRIN	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ENDOSULFAN I	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
ENDOSULFAN II	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ENDOSULFAN SULFATE	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ENDRIN	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ENDRIN ALDEHYDE	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
ENDRIN KETONE	MG/L	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)
GAMMA-BHC (LINDANE)	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
GAMMA-CHLORDANE	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
HEPTACHLOR	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
HEPTACHLOR EPOXIDE	MG/L	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)
METHOXYCHLOR	MG/L	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
TOXAPHENE	MG/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
VOLATILE ORGANIC COMPOUNDS									
1,1,1-TRICHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1,2,2-TETRACHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1,2-TRICHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-DICHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-DICHLOROETHENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-DICHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-DICHLOROPROPANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
2-HEXANONE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-METHYL-2-PENTANONE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-5	S-6	S-6	S-8
Sample ID.:		SW-KJJ-110	SW-WP-091	SW-WP-092	SW-WP-093	SW-KJJ-111	SW-WP-002	SW-WP-004	SW-WP-039
Date Sampled:	Units	08/30/94	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	06/04/94 Dup	06/04/94
VOLATILE ORGANIC COMPOUNDS (cont'd)									
ACETONE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	16 J	ND(10)UJ	ND(10)
BENZENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMODICHLOROMETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMOFORM	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMOMETHANE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CARBON DISULFIDE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CARBON TETRACHLORIDE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROBENZENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROFORM	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROMETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CIS-1,2-DICHLOROETHENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CIS-1,3-DICHLOROPROPENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
DIBROMOCHLOROMETHANE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
DICHLOROMETHANE	UG/L	ND(2.1)U	ND(1)	ND(1)	ND(1)	ND(1.6)U	ND(1)	ND(1)	ND(1)
ETHYLBENZENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
METHYL ETHYL KETONE	UG/L	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
STYRENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TETRACHLOROETHENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TOLUENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TRANS-1,2-DICHLOROETHENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TRANS-1,3-DICHLOROPROPENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TRICHLOROETHENE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
VINYL CHLORIDE	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
XYLENES	UG/L	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-10	S-11	S-11	S-15	S-20	TBLK1
Sample ID.:		SW-WP-099	SW-WP-095	SW-WP-096	SW-KJJ-114	SW-WP-027	SW-KJJ-112
Date Sampled:	Units	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	08/30/94
				Dup			
SEMIVOLATILE ORGANIC COMPOUNDS							
1,2,4-TRICHLOROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
1,2-DICHLOROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
1,3-DICHLOROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
1,4-DICHLOROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2,4,5-TRICHLOROPHENOL	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
2,4,6-TRICHLOROPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2,4-DICHLOROPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2,4-DIMETHYLPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2,4-DINITROPHENOL	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
2,4-DINITROTOLUENE	ug/l	ND(10)UJ	ND(10)UJ	ND(10)UJ	ND(10)	ND(10)	--
2,6-DINITROTOLUENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2-CHLORONAPHTHALENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2-CHLOROPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2-METHYLNAPHTHALENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2-METHYLPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
2-NITROANILINE	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
2-NITROPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
3,3'-DICHLOROBENZIDINE	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
3-NITROANILINE	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
4,6-DINITRO-O-CRESOL	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
4-BROMODIPHENYL ETHER	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
4-CHLORO-3-METHYLPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
4-CHLOROANILINE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
4-CHLOROPHENYL-PHENYLETHER	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
4-METHYLPHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
4-NITROANILINE	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
4-NITROPHENOL	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
ACENAPHTHENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
ACENAPHTHYLENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
ANTHRACENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BENZ(A)ANTHRACENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BENZO(A)PYRENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BENZO(B)FLUORANTHENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BENZO(G,H,I)PERYLENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BENZO(K)FLUORANTHENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BIS(2-CHLOROETHOXY)METHANE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BIS(2-CHLOROETHYL)ETHER	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BIS(2-CHLOROISOPROPYL)ETHER	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
BUTYLBENZYLPHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
CARBAZOLE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
CHRYSENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
DI-N-BUTYLPHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
DI-N-OCTYLPHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
DIBENZ(A,H)ANTHRACENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-10	S-11	S-11	S-15	S-20	TBLK1
Sample ID.:		SW-WP-099	SW-WP-095	SW-WP-096	SW-KJJ-114	SW-WP-027	SW-KJJ-112
Date Sampled:	Units	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	08/30/94
				Dup			
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)							
DIBENZOFURAN	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
DIETHYLPHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
DIMETHYLPHTHALATE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
FLUORANTHENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
FLUORENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
HEXACHLOROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
HEXACHLOROBUTADIENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
HEXACHLOROCYCLOPENTADIENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
HEXACHLOROETHANE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
INDENO(1,2,3-CD)PYRENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
ISOPHORONE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
N-NITROSO-DI-N-PROPYLAMINE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
N-NITROSODIPHENYLAMINE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
NAPHTHALENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
NITROBENZENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
PENTACHLOROPHENOL	ug/l	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)	--
PHENANTHRENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
PHENOL	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
PYRENE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	--
METALS							
ALUMINUM	mg/l	2.1	0.36	0.40	18	0.21	--
ANTIMONY	mg/l	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	ND(0.030)	--
ARSENIC	mg/l	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.018	ND(0.0050)	--
BARIUM	mg/l	0.073	0.058	0.058	0.17	0.051	--
BERYLLIUM	mg/l	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	--
CADMIUM	mg/l	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	--
CALCIUM	mg/l	50	89	88	63	63	--
CHROMIUM	mg/l	ND(0.010)	ND(0.010)	ND(0.010)	0.024	ND(0.010)	--
COBALT	mg/l	ND(0.010)	ND(0.010)	ND(0.010)	0.022	ND(0.010)	--
COPPER	mg/l	ND(0.020)	ND(0.020)	ND(0.020)	0.048 R	ND(0.020)	--
IRON	mg/l	6.9	3.5	3.7	55	0.65	--
LEAD	mg/l	0.0068	ND(0.0030)	ND(0.0030)	0.067	ND(0.0030)	--
MAGNESIUM	mg/l	13	21	21	17	17	--
MANGANESE	mg/l	0.75	0.68	0.69	1.4	0.15	--
MERCURY	mg/l	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00020)	--
NICKEL	mg/l	ND(0.010)	ND(0.010)	ND(0.010)	0.032	ND(0.010)	--
POTASSIUM	mg/l	6.3	5.6	5.5	8.6	1.1	--
SELENIUM	mg/l	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	--
SILVER	mg/l	ND(0.010)	0.016 J	ND(0.010)UJ	ND(0.010)	ND(0.010)	--
SODIUM	mg/l	6.4	21	21	3.7	2.2	--
THALLIUM	mg/l	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	--
VANADIUM	mg/l	ND(0.010)	ND(0.010)	ND(0.010)	0.039	ND(0.010)	--
ZINC	mg/l	0.077 R	0.81	0.83	0.29 R	ND(0.020)	--

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-10	S-11	S-11	S-15	S-20	TBLK1
Sample ID.:		SW-WP-099	SW-WP-095	SW-WP-096	SW-KJJ-114	SW-WP-027	SW-KJJ-112
Date Sampled:	Units	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	08/30/94
				Dup			
GENERAL CHEMISTRY (cont'd)							
CYANIDE	mg/l	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.005)	ND(0.01)	--
PESTICIDES AND PCB'S							
4,4'-DDD	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
4,4'-DDE	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
4,4'-DDT	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ALDRIN	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
ALPHA-BHC	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
ALPHA-CHLORDANE	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1016	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1221	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1232	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1242	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1248	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
AROCHLOR 1254	mg/l	ND(.01)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	--
AROCHLOR 1260	mg/l	ND(.01)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	--
BETA-BHC	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
DELTA-BHC	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
DIELDRIN	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ENDOSULFAN I	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
ENDOSULFAN II	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ENDOSULFAN SULFATE	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ENDRIN	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ENDRIN ALDEHYDE	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
ENDRIN KETONE	mg/l	ND(.001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	ND(0.0001)	--
GAMMA-BHC (LINDANE)	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
GAMMA-CHLORDANE	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
HEPTACHLOR	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
HEPTACHLOR EPOXIDE	mg/l	ND(.0005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	ND(0.00005)	--
METHOXYCHLOR	mg/l	ND(.005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	--
TOXAPHENE	mg/l	ND(.01)	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)	--
VOLATILE ORGANIC COMPOUNDS							
1,1,1-TRICHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1,2,2-TETRACHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1,2-TRICHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-DICHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,1-DICHLOROETHENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-DICHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
1,2-DICHLOROPROPANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
2-HEXANONE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-METHYL-2-PENTANONE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
ACETONE	ug/l	22	12	13	27	ND(10)	ND(10)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SURFACE WATER ANALYTICAL DATA

Location:		S-10	S-11	S-11	S-15	S-20	TBLK1
Sample ID.:		SW-WP-099	SW-WP-095	SW-WP-096	SW-KJJ-114	SW-WP-027	SW-KJJ-112
Date Sampled:	Units	06/15/94	06/15/94	06/15/94	08/30/94	06/04/94	08/30/94
				Dup			
VOLATILE ORGANIC COMPOUNDS (cont'd)							
BENZENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMODICHLOROMETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMOFORM	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
BROMOMETHANE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CARBON DISULFIDE	ug/l	ND(1)	ND(1)	ND(1)	2.3	ND(1)	ND(1)
CARBON TETRACHLORIDE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROBENZENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROFORM	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CHLOROMETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CIS-1,2-DICHLOROETHENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
CIS-1,3-DICHLOROPROPENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
DIBROMOCHLOROMETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
DICHLOROMETHANE	ug/l	ND(1)	ND(1)	ND(1)	ND(2.3)U	ND(1)	2.0
ETHYLBENZENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
METHYL ETHYL KETONE	ug/l	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
STYRENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TETRACHLOROETHENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TOLUENE	ug/l	9.6	ND(1)	ND(1)	6.1	ND(1)	ND(1)
TRANS-1,2-DICHLOROETHENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TRANS-1,3-DICHLOROPROPENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
TRICHLOROETHENE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
VINYL CHLORIDE	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
XYLENES	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)

Notes:

ND - The material was analyzed, but not detected above the stated method detection limit.
J - The associated numerical value is an estimated quantity.
U - The material was analyzed, but was not detected above the level of the associated value due to blank contamination.
-- - The parameter was not analyzed.
UJ - The material was analyzed, but was not detected above the the level of the associated value. The associated value may not accurately or precisely repesent the sample detection limit.
R - The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalyses are necessary to confirm or deny the presence of the analyte.

APPENDIX C.2

SEDIMENT ANALYTICAL DATA

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-4	S-5	S-6	S 6
Sample ID.:		D-WP-014	D-WP-012	D-WP-010	D-WP-006	D-WP-008	D-WP-016	D-WP-002	D-WP-002
Date Sampled:	Units	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94
						Dup			Reanal
SEMIVOLATILE ORGANIC COMPOUNDS									
1,2,4-TRICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
1,2-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
1,3-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
1,4-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2,4,5-TRICHLOROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
2,4,6-TRICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2,4-DICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2,4-DIMETHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2,4-DINITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
2,4-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2,6-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2-CHLORONAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2-CHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2-METHYLNAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
2-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
2-NITROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
3,3'-DICHLOROBENZIDINE	ug/kg	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	--
3-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
4,6-DINITRO-O-CRESOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
4-BROMODIPHENYL ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
4-CHLORO-3-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
4-CHLOROANILINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
4-CHLOROPHENYL-PHENYLETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
4-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
4-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
4-NITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
ACENAPHTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
ACENAPHTHYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BENZ(A)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BENZO(A)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BENZO(B)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BENZO(G,H,I)PERYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BENZO(K)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BIS(2-CHLOROETHOXY)METHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BIS(2-CHLOROETHYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BIS(2-CHLOROISOPROPYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BIS(2-ETHYLHEXYL)PHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
BUTYLBENZYLPHTHALATE	ug/kg	ND(330)	410	ND(330)	ND(330)	ND(330)	650	ND(330)	--
CARBAZOLE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
CHRYSENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
DI-N-BUTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
DI-N-OCTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
DIBENZ(A,H)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-4	S-5	S-6	S 6
Sample ID.:		D-WP-014	D-WP-012	D-WP-010	D-WP-006	D-WP-008	D-WP-016	D-WP-002	D-WP 002
Date Sampled:	Units	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94 Dup	06/04/94	06/04/94	06/04/94 Reanal
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)									
DIBENZOFURAN	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
DIETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
DIMETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
FLUORENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
HEXACHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
HEXACHLOROBUTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
HEXACHLOROCYCLOPENTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
HEXACHLOROETHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
INDENO(1,2,3-CD)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
ISOPHORONE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
N-NITROSO-DI-N-PROPYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
N-NITROSODIPHENYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
NAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
NITROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
PENTACHLOROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	--
PHENANTHRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
PHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	--
METALS									
ALUMINUM	mg/kg	5800	11000	12000	11000	9900	13000	10000	--
ANTIMONY	mg/kg	ND(3.0)	ND(30.)	ND(30.)	ND(30.)	ND(30.)	ND(30.)	ND(30.)	--
ARSENIC	mg/kg	4.3	6.5	6.3	5.6	5.7	6.0	4.8	--
BARIUM	mg/kg	20	34	38	39	39	26	41	--
BERYLLIUM	mg/kg	ND(0.50)	0.53	0.53	ND(0.50)	ND(0.50)	0.53	ND(0.50)	--
CADMIUM	mg/kg	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	--
CALCIUM	mg/kg	52000	38000	36000	31000	29000	39000	21000	--
CHROMIUM	mg/kg	13	25	26	28	22	22	20	--
COBALT	mg/kg	6.3	10	10	6.5 J	10 J	8.7	4.3	--
COPPER	mg/kg	14	24	24	27	25	22	18	--
IRON	mg/kg	13000	23000	22000	21000	21000	20000	15000	--
LEAD	mg/kg	21	28	24	22	23	23	30	--
MAGNESIUM	mg/kg	24000	19000	19000	16000	15000	20000	11000	--
MANGANESE	mg/kg	360	400	380	320	330	380	150	--
MERCURY	mg/kg	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	--
NICKEL	mg/kg	15 R	30	30	34	30	41	17	--
POTASSIUM	mg/kg	1500	2500	3300	3200 J	2200 J	3700	2300	--
SELENIUM	mg/kg	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--
SILVER	mg/kg	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	--
SODIUM	mg/kg	100 R	100 R	130 R	120 R	100 R	170 R	71 J	--
THALLIUM	mg/kg	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	--
VANADIUM	mg/kg	12	19	21	20	17	22	8.9	--
ZINC	mg/kg	120	150	130	130	130	130	130	--

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-4	S-5	S-6	S-6
Sample ID.:		D-WP-014	D-WP-012	D-WP-010	D-WP-006	D-WP-008	D-WP-016	D-WP-002	D-WP-002
Date Sampled:	Units	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94 Dup	06/04/94	06/04/94	06/04/94 Reanal
GENERAL CHEMISTRY (cont'd)									
CYANIDE	mg/kg	1.8	1.1	0.74	0.67	0.57	0.58	ND(0.25)	--
SOLIDS	percent	88	75	77	41	75	80	53	--
PESTICIDES AND PCB'S									
4,4'-DDD	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
4,4'-DDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
4,4'-DDT	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ALDRIN	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
ALPHA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
ALPHA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1016	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1221	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1232	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1242	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1248	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
AROCHLOR 1254	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	--
AROCHLOR 1260	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	--
BETA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
DELTA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
DIELDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ENDOSULFAN I	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
ENDOSULFAN II	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ENDOSULFAN SULFATE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ENDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ENDRIN ALDEHYDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
ENDRIN KETONE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	--
GAMMA-BHC (LINDANE)	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
GAMMA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
HEPTACHLOR	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
HEPTACHLOR EPOXIDE	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	--
METHOXYCHLOR	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	--
TOXAPHENE	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	--
VOLATILE ORGANIC COMPOUNDS									
1,1,1-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,1,2,2-TETRACHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,1,2-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,1-DICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,1-DICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,2-DICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,2-DICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
1,2-DICHLOROPROPANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
2-HEXANONE	ug/kg	ND(50)	ND(50)	ND(10)UJ	ND(50)	ND(50)	ND(10)	ND(50)	ND(50)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-1	S-2	S-3	S-4	S-4	S-5	S-6	S-6
Sample ID.:		D-WP-014	D-WP-012	D-WP-010	D-WP-006	D-WP-008	D-WP-016	D-WP-002	D-WP-002
Date Sampled:	Units	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94	06/04/94
						Dup			Reanal
VOLATILE ORGANIC COMPOUNDS (cont'd)									
4-METHYL-2-PENTANONE	ug/kg	ND(50)	ND(50)	ND(10)UJ	ND(50)	ND(50)	ND(10)	ND(50)	ND(50)
ACETONE	ug/kg	34	33	ND(20)UJ	69 J	24 J	ND(20)	410 J	430
BENZENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
BROMODICHLOROMETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
BROMOFORM	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
BROMOMETHANE	ug/kg	ND(10)	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
CARBON DISULFIDE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
CARBON TETRACHLORIDE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
CHLOROBENZENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
CHLOROETHANE	ug/kg	ND(10)	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
CHLOROFORM	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
CHLOROMETHANE	ug/kg	ND(10)	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
CIS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
DIBROMOCHLOROMETHANE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
DICHLOROMETHANE	ug/kg	15	ND(5)	15 J	8 J	ND(5)UJ	ND(5)	ND(5)	ND(25)
ETHYLBENZENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
METHYL ETHYL KETONE	ug/kg	ND(50)	ND(50)	ND(10)UJ	ND(50)	ND(50)	ND(10)	ND(50)	ND(50)
STYRENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
TETRACHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
TOLUENE	ug/kg	13	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
TRANS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
TRICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)
VINYL CHLORIDE	ug/kg	ND(10)	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(50)
XYLENES	ug/kg	ND(5)	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(25)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-7	S-8	S-9	S-10	S-11	S-11	S-12	S-13
Sample ID.:		D-WP-004	D-WP-041	D-WP-100	D-WP-102	D-WP-097	D-WP-098	D-WP-031	D-WP-033
Date Sampled:	Units	06/04/94	06/04/94	06/15/94	06/15/94	06/15/94	06/15/94	06/04/94	06/04/94
							Dup		
SEMIVOLATILE ORGANIC COMPOUNDS									
1,2,4-TRICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
1,2-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
1,3-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
1,4-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2,4,5-TRICHLOROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
2,4,6-TRICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2,4-DICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2,4-DIMETHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2,4-DINITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
2,4-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2,6-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2-CHLORONAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2-CHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2-METHYLNAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
2-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
2-NITROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
3,3'-DICHLOROBENZIDINE	ug/kg	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)
3-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
4,6-DINITRO-O-CRESOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
4-BROMODIPHENYL ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
4-CHLORO-3-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
4-CHLOROANILINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
4-CHLOROPHENYL-PHENYLETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
4-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
4-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
4-NITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
ACENAPHTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
ACENAPHTHYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BENZ(A)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BENZO(A)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BENZO(B)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BENZO(G,H,I)PERYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BENZO(K)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BIS(2-CHLOROETHOXY)METHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BIS(2-CHLOROETHYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BIS(2-CHLOROISOPROPYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BIS(2-ETHYLHEXYL)PHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
BUTYLBENZYLPHTHALATE	ug/kg	1100	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
CARBAZOLE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
CHRYSENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
DI-N-BUTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
DI-N-OCTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
DIBENZ(A,H)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-7	S-8	S-9	S-10	S-11	S-11	S-12	S-13
Sample ID.:		D-WP-004	D-WP-041	D-WP-100	D-WP-102	D-WP-097	D-WP-098	D-WP-031	D-WP-033
Date Sampled:	Units	06/04/94	06/04/94	06/15/94	06/15/94	06/15/94	06/15/94 Dup	06/04/94	06/04/94
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)									
DIBENZOFURAN	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
DIETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
DIMETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
FLUORENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
HEXACHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
HEXACHLOROBUTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
HEXACHLOROCYCLOPENTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
HEXACHLOROETHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
INDENO(1,2,3-CD)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
ISOPHORONE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
N-NITROSO-DI-N-PROPYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
N-NITROSODIPHENYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
NAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
NITROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
PENTACHLOROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)
PHENANTHRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
PHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)
METALS									
ALUMINUM	mg/kg	4100	6900	1000	4300	11000	7700	10000	15000
ANTIMONY	mg/kg	ND(30.)	ND(30.)	ND(30.)	ND(300)	ND(300)	ND(300)	ND(3.0)	ND(150)
ARSENIC	mg/kg	2.8	5.3	0.91	2.1	6.1	5.7	5.9	7.3
BARIUM	mg/kg	22	28	16	50	33	30	67	59
BERYLLIUM	mg/kg	0.79	ND(0.50)	ND(0.50)	ND(0.50)	0.60	ND(0.50)	ND(0.50)	0.79
CADMIUM	mg/kg	ND(2.5)	ND(5.0)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(2.5)	ND(0.50)
CALCIUM	mg/kg	21000	28000	1400	2200	4200 J	39000 J	25000	21000
CHROMIUM	mg/kg	8.8	13	3.0	7.7	11	11	24	28
COBALT	mg/kg	9.2	8.0	ND(1.0)	2.0	7.3	7.5	9.3	9.8
COPPER	mg/kg	12	16	2.7	7.4	13	12	27	28
IRON	mg/kg	8700	17000	1300	4900	17000	17000	19000	24000
LEAD	mg/kg	10	16	11	24	11	11	36	35
MAGNESIUM	mg/kg	12000	14000	200	550	3800 J	12000 J	13000	13000
MANGANESE	mg/kg	340	350	36 R	43 R	210 J	220 J	1600	670
MERCURY	mg/kg	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)	ND(0.12)
NICKEL	mg/kg	12 R	19	1.8	5.5	ND(12)U	ND(12)U	26	27
POTASSIUM	mg/kg	940	1400	140	410	1700	1500	2000	2900
SELENIUM	mg/kg	ND(0.50)	ND(0.50)	ND(0.50)	0.51	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
SILVER	mg/kg	ND(1.0)	ND(1.0)	1.1	1.1	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
SODIUM	mg/kg	120 R	81 R	24 R	43 R	71 R	84 R	240 R	250 R
THALLIUM	mg/kg	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.1 J	ND(1.0)UJ	ND(1.0)	ND(1.0)
VANADIUM	mg/kg	19	13	1.8	7.3	21	16	18	26
ZINC	mg/kg	70	81	21 R	40 R	69	62 R	170	160

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-7	S-8	S-9	S-10	S-11	S-11	S-12	S-13
Sample ID.:		D-WP-004	D-WP-041	D-WP-100	D-WP-102	D-WP-097	D-WP-098	D-WP-031	D-WP-033
Date Sampled:	Units	06/04/94	06/04/94	06/15/94	06/15/94	06/15/94	06/15/94 Dup	06/04/94	06/04/94
GENERAL CHEMISTRY (cont'd)									
CYANIDE	mg/kg	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	0.31 R
SOLIDS	percent	52	72	23	26	82	81	82	83
PESTICIDES AND PCB'S									
4,4'-DDD	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
4,4'-DDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
4,4'-DDT	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ALDRIN	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ALPHA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ALPHA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1016	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1221	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1232	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1242	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1248	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1254	mg/kg	ND(0.160)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)
AROCHLOR 1260	mg/kg	ND(0.160)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)
BETA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
DELTA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
DIELDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDOSULFAN I	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ENDOSULFAN II	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDOSULFAN SULFATE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN ALDEHYDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN KETONE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
GAMMA-BHC (LINDANE)	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
GAMMA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
HEPTACHLOR	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
HEPTACHLOR EPOXIDE	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
METHOXYCHLOR	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
TOXAPHENE	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)
VOLATILE ORGANIC COMPOUNDS									
1,1,1-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1,2,2-TETRACHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1,2-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1-DICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1-DICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROPROPANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
2-HEXANONE	ug/kg	ND(50)	ND(50)	ND(10)	ND(10)	ND(50)	ND(50)	ND(50)	ND(50)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-7	S-8	S-9	S-10	S-11	S-11	S-12	S-13
Sample ID.:		D-WP-004	D-WP-041	D-WP-100	D-WP-102	D-WP-097	D-WP-098	D-WP-031	D-WP-033
Date Sampled:	Units	06/04/94	06/04/94	06/15/94	06/15/94	06/15/94	06/15/94 Dup	06/04/94	06/04/94
VOLATILE ORGANIC COMPOUNDS (cont'd)									
4-METHYL-2-PENTANONE	ug/kg	ND(50)	ND(50)	19	ND(10)	ND(50)	ND(50)	ND(50)	ND(50)
ACETONE	ug/kg	ND(50)	31	32	29	ND(50)	ND(50)	ND(20)	ND(20)
BENZENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMODICHLOROMETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMOFORM	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMOMETHANE	ug/kg	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CARBON DISULFIDE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CARBON TETRACHLORIDE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CHLOROBENZENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CHLOROETHANE	ug/kg	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CHLOROFORM	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CHLOROMETHANE	ug/kg	ND(10)	ND(10)	ND(5)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CIS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
DIBROMOCHLOROMETHANE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
DICHLOROMETHANE	ug/kg	12	ND(5)	ND(5)	ND(5)	9 J	22 J	6	9
ETHYLBENZENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
METHYL ETHYL KETONE	ug/kg	ND(50)	ND(50)	ND(10)	ND(10)	ND(50)	ND(50)	ND(50)	ND(50)
STYRENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
TETRACHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
TOLUENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
TRANS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
TRICHLOROETHENE	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
VINYL CHLORIDE	ug/kg	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
XYLENES	ug/kg	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample ID.:		D-WP-037	D-KJJ-113	D-WP-104	D-KJJ-109	D-KJJ-107	D-KJJ-108	D-WP-029
Date Sampled:	Units	06/04/94	08/30/94	06/15/94	08/30/94	08/30/94	08/30/94	06/04/94
SEMIVOLATILE ORGANIC COMPOUNDS								
1,2,4-TRICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
1,2-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
1,3-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
1,4-DICHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2,4,5-TRICHLOROPHENOL	ug/kg	ND(1600)	ND(330)	ND(1600)	ND(330)	ND(330)	ND(8000)	ND(1600)
2,4,6-TRICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2,4-DICHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2,4-DIMETHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2,4-DINITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
2,4-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2,6-DINITROTOLUENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2-CHLORONAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2-CHLOROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2-METHYLNAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
2-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
2-NITROPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
3,3'-DICHLOROBENZIDINE	ug/kg	ND(660)	ND(660)	ND(660)	ND(660)	ND(660)	ND(3300)	ND(660)
3-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
4,6-DINITRO-O-CRESOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
4-BROMODIPHENYL ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
4-CHLORO-3-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
4-CHLOROANILINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
4-CHLOROPHENYL-PHENYLETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
4-METHYLPHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
4-NITROANILINE	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
4-NITROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
ACENAPHTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
ACENAPHTHYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BENZ(A)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BENZO(A)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BENZO(B)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BENZO(G,H,I)PERYLENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BENZO(K)FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BIS(2-CHLOROETHOXY)METHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BIS(2-CHLOROETHYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BIS(2-CHLOROISOPROPYL)ETHER	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BIS(2-ETHYLHEXYL)PHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
BUTYLBENZYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
CARBAZOLE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
CHRYSENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
DI-N-BUTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
DI-N-OCTYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
DIBENZ(A,H)ANTHRACENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample ID.:		D-WP-037	D-KJJ-113	D-WP-104	D-KJJ-109	D-KJJ-107	D-KJJ-108	D-WP-029
Date Sampled:	Units	06/04/94	08/30/94	06/15/94	08/30/94	08/30/94	08/30/94	06/04/94
SEMIVOLATILE ORGANIC COMPOUNDS (cont'd)								
DIBENZOFURAN	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
DIETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
DIMETHYLPHTHALATE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
FLUORANTHENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
FLUORENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
HEXACHLOROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
HEXACHLOROBUTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
HEXACHLOROCYCLOPENTADIENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
HEXACHLOROETHANE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
INDENO(1,2,3-CD)PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
ISOPHORONE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
N-NITROSO-DI-N-PROPYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
N-NITROSODIPHENYLAMINE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
NAPHTHALENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
NITROBENZENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
PENTACHLOROPHENOL	ug/kg	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(1600)	ND(8000)	ND(1600)
PHENANTHRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
PHENOL	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
PYRENE	ug/kg	ND(330)	ND(330)	ND(330)	ND(330)	ND(330)	ND(1600)	ND(330)
METALS								
ALUMINUM	mg/kg	11000	3000	7900	9200	11000	9100	3000
ANTIMONY	mg/kg	ND(150)	ND(3.0)UJ	ND(60.)	3.2 J	6.7 J	3.8 J	ND(3.0)
ARSENIC	mg/kg	5.2	1.7	4.6	4.1	6.6	5.3	0.60
BARIUM	mg/kg	54	37	57	56	50	64	25
BERYLLIUM	mg/kg	ND(0.50)	ND(0.50)UJ	ND(1.0)	0.55 J	0.66 J	0.53 J	ND(0.50)
CADMIUM	mg/kg	ND(0.50)	ND(0.50)	ND(2.0)	0.67	1.3	0.95	ND(2.5)
CALCIUM	mg/kg	9100	760	840	1900	17000	4600	7300
CHROMIUM	mg/kg	20	4.3	11	13	22	16	6.3
COBALT	mg/kg	7.4	2.5	5.1	5.8	8.9	8.0	2.7
COPPER	mg/kg	19	2.0	4.9	9.9	16	14	ND(10.)
IRON	mg/kg	16000	5000	5900	14000	21000	18000	4000
LEAD	mg/kg	26	9.7	18 J	14	27	22	6.5
MAGNESIUM	mg/kg	6600	500	1100	1900	9300	3600	2600
MANGANESE	mg/kg	430	340	650	140	410	280	65
MERCURY	mg/kg	ND(0.12)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.12)
NICKEL	mg/kg	19	4.0	9.1	13	25	18	8.8 R
POTASSIUM	mg/kg	2000	320 R	390	860 J	1900 J	1200 J	420
SELENIUM	mg/kg	ND(0.50)	0.61	ND(1.0)	0.54	ND(0.50)	0.59	0.74
SILVER	mg/kg	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
SODIUM	mg/kg	150 R	89 R	59 R	110 R	130 R	140 R	31 R
THALLIUM	mg/kg	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
VANADIUM	mg/kg	20	6.9	22	20	20	19	6.9
ZINC	mg/kg	120	22 R	40	47 R	140	100	33 R

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample ID.:		D-WP-037	D-KJJ-113	D-WP-104	D-KJJ-109	D-KJJ-107	D-KJJ-108	D-WP-029
Date Sampled:	Units	06/04/94	08/30/94	06/15/94	08/30/94	08/30/94	08/30/94	06/04/94
GENERAL CHEMISTRY (cont'd)								
CYANIDE	mg/kg	ND(0.25)	ND(0.12)	ND(0.25)	0.18	ND(0.12)	0.18	ND(0.25)
SOLIDS	percent	69	85	84	77	84	76	38
PESTICIDES AND PCB'S								
4,4'-DDD	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
4,4'-DDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
4,4'-DDT	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ALDRIN	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ALPHA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ALPHA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1016	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1221	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1232	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1242	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1248	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
AROCHLOR 1254	mg/kg	ND(0.16)	ND(0.160)	ND(0.16)	ND(0.160)	ND(0.160)	ND(0.160)	ND(0.16)
AROCHLOR 1260	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)
BETA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
DELTA-BHC	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
DIELDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDOSULFAN I	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
ENDOSULFAN II	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDOSULFAN SULFATE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN ALDEHYDE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
ENDRIN KETONE	mg/kg	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)	ND(0.016)
GAMMA-BHC (LINDANE)	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
GAMMA-CHLORDANE	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
HEPTACHLOR	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
HEPTACHLOR EPOXIDE	mg/kg	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)	ND(0.0080)
METHOXYCHLOR	mg/kg	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)	ND(0.080)
TOXAPHENE	mg/kg	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)	ND(0.16)
VOLATILE ORGANIC COMPOUNDS								
1,1,1-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1,2,2-TETRACHLOROETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1,2-TRICHLOROETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1-DICHLOROETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,1-DICHLOROETHENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROETHENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
1,2-DICHLOROPROPANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
2-HEXANONE	ug/kg	ND(10)	ND(50)UJ	ND(50)	ND(50)UJ	ND(50)	ND(50)	ND(50)

FOUR COUNTY LANDFILL SITE

FULTON COUNTY, INDIANA
SUMMARY OF SEDIMENT ANALYTICAL DATA

Location:		S-14	S-15	S-16	S-17	S-18	S-19	S-20
Sample ID.:		D-WP-037	D-KJJ-113	D-WP-104	D-KJJ-109	D-KJJ-107	D-KJJ-108	D-WP-029
Date Sampled:	Units	06/04/94	08/30/94	06/15/94	08/30/94	08/30/94	08/30/94	06/04/94
VOLATILE ORGANIC COMPOUNDS (cont'd)								
4-METHYL-2-PENTANONE	ug/kg	ND(10)	ND(50)UJ	ND(50)	ND(50)UJ	ND(50)	ND(50)	ND(50)
ACETONE	ug/kg	ND(20)	ND(50)UJ	ND(50)	ND(50)	ND(50)	ND(50)	49
BENZENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMODICHLOROMETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMOFORM	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
BROMOMETHANE	ug/kg	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CARBON DISULFIDE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CARBON TETRACHLORIDE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CHLOROBENZENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)
CHLOROETHANE	ug/kg	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CHLOROFORM	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
CHLOROMETHANE	ug/kg	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
CIS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
DIBROMOCHLOROMETHANE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
DICHLOROMETHANE	ug/kg	ND(5)	ND(5)UJ	15	6	ND(5)	8	ND(5)
ETHYLBENZENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)
METHYL ETHYL KETONE	ug/kg	ND(10)	ND(50)UJ	ND(50)	ND(50)	ND(50)	ND(50)	ND(50)
STYRENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)
TETRACHLOROETHENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)
TOLUENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)
TRANS-1,3-DICHLOROPROPENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
TRICHLOROETHENE	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)
VINYL CHLORIDE	ug/kg	ND(10)	ND(10)UJ	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
XYLENES	ug/kg	ND(5)	ND(5)UJ	ND(5)	ND(5)UJ	ND(5)	ND(5)	ND(5)

Notes:

ND - The material was analyzed, but not detected above the stated method detection limit.
J - The associated numerical value is an estimated quantity.
U - The material was analyzed, but was not detected above the level of the associated value due to blank contamination.
-- - The parameter was not analyzed.
UJ - The material was analyzed, but was not detected above the the level of the associated value. The associated value may not accurately or precisely repesent the sample detection limit.
R - The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalyses are necessary to confirm or deny the presence of the analyte.

APPENDIX D

LABORATORY ANALYTICAL REPORTS AND DATA VALIDATION

MEMO

TO: Steve Wanner REFERENCE NO: 5369-50

FROM: Deborah Gage DG DATE: October 13, 1994

RE: Data Quality Assessment and Validation for the Multiple Sediment and Surface Water Samples Collected from the Four County Landfill Site in Fulton County, Indiana

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The following details an analytical data quality assessment and validation of the data resulting from the June and August 1994 collection of multiple sediment and surface water samples from the above-referenced Site. The samples, identified in Table 1, were analyzed for target compound list (TCL) volatile organic compounds (VOC), TCL semi-volatile organic compounds (SVOC), TCL pesticides/polychlorinated biphenyls (PCB) and target analyte list (TAL) inorganics by Heritage Laboratories, Inc. (HLI) in Indianapolis, Indiana. Additionally, the sediment samples were analyzed for total organic carbon (TOC). The analytical methods used are presented in Table 2. The quality assurance criteria used to assess the data were established by the methods of analyses and the associated quality assurance project plan.[1]

Holding Time Periods

The holding time periods are presented in Table 3. As indicated by the sample collection and analyses dates on the chain-of-custody forms and the analytical reports provided by HLI, all samples were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the concurrent preparation and analysis of method blank samples. Method blank contamination was reported in several of the metals method blank samples. Table 4 presents the sample data which should be qualified. The remaining method blank samples were reported to be free from detectable concentrations of target analytes, indicating no other laboratory contamination occurred.

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[1]Application of the quality control criteria was consistent with "Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses", February 1, 1988 and "Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses", October 1989.

System Monitoring Compounds/Surrogate Spikes

Laboratory performance on individual samples for TCL VOC, TCL SVOC and TCL pesticide/PCB analyses was monitored by using percent recoveries of system monitoring compounds/surrogate spikes. The surrogate recovery acceptance criteria was not met in the VOC analysis of sample D-060494-WP-010. As a result, all detected VOC analytes should be qualified as estimated (J) and for non-detected analytes, the quantitation limit should be qualified as estimated (UJ). The remaining surrogate spike data were within the acceptance criteria.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results - Organic Analyses

To assess the long-term accuracy and precision of the analytical methods on sample matrices, MS/MSD percent recoveries and the relative percent differences (RPD) of the recoveries were determined. The MS/MSD percent recoveries for endrin and aldrin exceeded the control limit acceptance criteria in two of the surface water TCL pesticide/PCB analyses. However, no qualification of the sample data was required as endrin and aldrin were not detected in the associated samples. The RPD value between the MS/MSD percent recoveries for 2,4-dinitrotoluene was outside of the acceptance criteria in one of the SVOC MS/MSD analyses. Therefore, the quantitation limit for 2,4-dinitrotoluene in the following samples should be qualified as estimated (UJ): SW-061594-WP-091, SW-061594-WP-092, SW-061594-WP-093, SW-061594-WP-094, SW-061594-WP-095, SW-061594-WP-096 and SW-061594-WP-099. Although the laboratory often provided MS/MSD data for all VOC, SVOC and Pesticide/PCB parameters, only those defined by the laboratory's standard operating procedures were evaluated. The remaining MS/MSD and RPD data associated with project samples were within the acceptance criteria.

GC/ECD Instrument Performance

GC/ECD instrument performance for TCL pesticides/PCBs may be evaluated by assessing percent breakdown of 4,4'-DDT and endrin. For several samples, the laboratory indicated that the percent breakdown of 4,4'-DDT and endrin violated the acceptance criteria. However, no qualification of the associated investigative data was required as no target analytes were detected.

Continuing Calibration

The continuing calibration data for pesticides/PCB analyses used to assess instrument performance was reported by the laboratory to be in violation of the acceptance criteria. However, no qualification of the associated investigative data was required as no target analytes were detected.

Matrix Spike/Laboratory Duplicate (MS/DUP) Results - Inorganic Analyses

To assess the long term accuracy and precision of the inorganic analytical method on sample matrices, MS percent recoveries and the relative percent difference of

laboratory duplicate results were determined. The RPDs between duplicate samples exceeded the laboratory established acceptance criteria for manganese, lead, antimony, beryllium and potassium. Table 5 presents the sample data which should be qualified due to violation of MS/DUP acceptance criteria. Although several MS recoveries were diluted beyond the detectable range, the remaining MS/DUP data were within the acceptance criteria.

Internal Standards

Internal standard data are used to assess overall VOC and SVOC instrument performance. The laboratory identified that internal standards violated the acceptance criteria in the VOC analysis of samples D-083094-KJJ-109 and D-083094-KJJ-113. Only one internal standard, chlorobenzene-d5, was outside of the acceptance criteria in the VOC analysis of sample D-083094-KJJ-109. Therefore, for only the following VOC parameters, the quantitation limit should be qualified as estimated (UJ): 2-hexanone, 4-methyl-2-pentanone, tetrachloroethene, 1,1,1,2-tetrachloroethane, toluene, chlorobenzene, ethylbenzene, styrene and total xylenes. However, all intertnal standards violated the acceptance criteria in the VOC analysis of sample D-083094-KJJ-113. All, VOC quantitation limits therefore should be qualified as estimated (UJ).

Sample Analysis

In the VOC analysis of sample D-060494-WP-002, acetone was detected at a concentration that exceeded that linear calibration range of the instrument. Therefore, the reported value should be qualified as estimated (J).

Laboratory Control Samples (LCS)

Overall performance of the analyses were monitored by LCS analyses. The LCS data were acceptable.

Field Quality Assurance/Quality Control (QA/QC)

The field QA/QC consisted of the collection of two rinsate blank samples, four duplicate sample sets and one trip blank sample.

To monitor the effectiveness of the field decontamination procedures, two rinsate blank samples were collected. Several metals were detected in the rinsate blank samples. However, only the samples affected by nickel contamination should be qualified since the samples were previously qualified for other analytes present in the rinsate blank sample due to method blank contamination. Therefore, the presence of nickel in the following samples should be qualified as non-detect at the reporting limit stated in parentheses: D-061594-WP-097 [U(12) mg/kg] and D-061594-WP-098 [U(12) mg/kg]. No other qualification of sample data due to rinsate blank contamination was required.

Trip blank samples were analyzed to monitor the potential cross-contamination of samples due to highly concentrated VOC during sample transport and storage. Methylene chloride was detected in one of the trip blank samples. Therefore, the presence of methylene chloride should be qualified as non-detect at the reporting limit stated in parentheses for the following samples: SW-083094-KJJ-106 [U(1.7) µg/L], SW-083094-KJJ-110 [U(2.1) µg/L], SW-083094-KJJ-111 [U(1.6) µg/L] and SW-083094-KJJ-114 [U(2.3) µg/L]. No other analytes were reported as detected in the trip blank samples.

As a check on the overall laboratory precision, field duplicate sample sets were collected. The data were assessed for precision using an RPD criteria of 25% for surface water data and 35% for sediment data. Table 6 presents the results of the detected field duplicate data and associated qualifications.

Completeness

Completeness, as determined by the total number of usable results versus the total number of results, was required to be 80 percent or greater. The majority of the data were considered usable (with qualifications) and the completeness criteria was determined to have been met.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision based upon a review of the QA/QC data specified in the associated quality assurance project plan and may be used with the qualifications noted in the text and outlined in the tables.

DKG/mk/9

Attachments

cc: S. Day

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

SW-060494-WP-002
SW-060494-WP-004
SW-060494-WP-027
SW-060494-WP-035
SW-060494-WP-039
SW-060494-WP-091
SW-060494-WP-092
SW-061594-WP-093
SW-061594-WP-094
SW-061594-WP-095
SW-061594-WP-096
SW-061594-WP-099
SW-083094-KJJ-106
SW-083094-KJJ-110
SW-083094-KJJ-111
SW-083094-KJJ-112
SW-083094-KJJ-114
D-060494-WP-002
D-060494-WP-004
D-060494-WP-006
D-060494-WP-008
D-060494-WP-010
D-060494-WP-012
D-060494-WP-014
D-060494-WP-016
D-060494-WP-029
D-060494-WP-031
D-060494-WP-033
D-060494-WP-037
D-060494-WP-041
D-061594-WP-097
D-061594-WP-098
D-061594-WP-100
D-061594-WP-102
D-061594-WP-104
D-083094-KJJ-107
D-083094-KJJ-108
D-083094-KJJ-109
D-083094-KJJ-113

TABLE 2

ANALYTICAL METHODS
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Analytical Method*	
TCL VOC	SW-846 [1]	8240A/8260A
TCL SVOC	SW-846	8270A
TCL Pesticide/PCB	SW-846	8080
TAL Metals	SW-846	6010/7000 series
Cyanide	SW-846	9012
TOC	SW-846	9060

[1] "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, 3rd edition, November 1986 and relevant updates.

TABLE 3

HOLDING TIME PERIODS
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Holding Time Period*
TCL VOC	- 14 days from sample collection to completion of analysis
TCL SVOC/ TCL pesticide/PCB	- 14 days from sample collection to extraction (soil/sediment) - 7 days from sample collection to extraction (aqueous) - 40 days from extraction to completion of analysis
TAL Metals (Except Mercury)	- 6 months from sample collection to completion of analysis
Mercury	- 28 days from sample collection to completion of analysis
Cyanide	- 14 days from sample collection to completion of analysis
TOC	- 28 days from sample collection to completion of analysis

TABLE 4

QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION FOUR COUNTY LANDFILL SITE FULTON COUNTY, INDIANA

Analyte	*Associated Samples*	*Qualified Sample Result* [1] *(mg/kg)*
Sodium	D-060494-WP-002	71R
	D-060494-WP-004	120R
	D-060494-WP-006	120R
	D-060494-WP-008	100R
	D-060494-WP-010	130R
	D-060494-WP-012	100R
	D-060494-WP-014	100R
	D-060494-WP-016	170R
	D-060494-WP-029	31R
	D-060494-WP-031	240R
	D-060494-WP-033	250R
	D-060494-WP-037	150R
	D-060494-WP-041	81R
	D-061594-WP-097	71R
	D-061594-WP-098	84R
	D-061594-WP-100	24R
	D-061594-WP-102	43R
	D-061594-WP-104	59R
	D-083094-KJJ-107	130R
	D-083094-KJJ-108	140R
	D-083094-KJJ-109	110R
	D-083094-KJJ-113	89R
Cyanide	D-060494-WP-033	0.31R
Nickel	D-060494-WP-004	12R
	D-060494-WP-014	15R
	D-060494-WP-029	8.8R
	SW-060494-WP-002	0.013 mg/L R
	SW-060494-WP-004	0.013 mg/L R

TABLE 4

QUALIFIED SAMPLE DATA DUE TO METHOD BLANK CONTAMINATION FOUR COUNTY LANDFILL SITE FULTON COUNTY, INDIANA

Analyte	*Associated Samples*	*Qualified Sample Result (mg/kg)* [1]
Zinc	D-060494-WP-029	33R
	D-061594-WP-098	62R
	D-061594-WP-100	21R
	D-061594-WP-102	40R
	D-083094-KJJ-109	47R
	D-083094-KJJ-113	22R
	SW-061594-WP-091	0.041 mg/L R
	SW-061594-WP-092	0.045 mg/L R
	SW-061594-WP-093	0.042 mg/L R
	SW-061594-WP-094	0.020 mg/L R
	SW-061594-WP-099	0.077 mg/L R
	SW-060494-WP-002	0.052 mg/L R
	SW-060494-WP-004	0.037 mg/L R
	SW-083094-KJJ-114	0.29 mg/L R
Magnesium	SW-083094-KJJ-106	0.31 mg/L R
Copper	SW-083094-KJJ-114	0.048 mg/L R
Potassium	SW-083094-KJJ-113	320R

[1] R - The analyte was analyzed for but the presence or absence of the analyte has not been verified. Resampling and reanalyses are necessary to confirm or deny the presence of the analyte.

TABLE 5

QUALIFIED SAMPLE DATA DUE TO VIOLATION OF
MATRIX SPIKE/LABORATORY DUPLICATE (MS/DUP) ACCEPTANCE CRITERIA
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Associated Samples*	*Qualifier* [1]
Lead	D-061594-WP-104	J
Manganese	D-061594-WP-097	J
	D-061594-WP-098	J
	D-061594-WP-100	J
	D-061594-WP-102	J
Antimony	D-083094-KJJ-107	J
	D-083094-KJJ-108	J
	D-083094-KJJ-109	J
	D-083094-KJJ-113	UJ
Beryllium	D-083094-KJJ-107	J
	D-083094-KJJ-108	J
	D-083094-KJJ-109	J
	D-083094-KJJ-113	UJ
Potassium	D-083094-KJJ-107	J
	D-083094-KJJ-108	J
	D-083094-KJJ-109	J

[1] J = The associated numerical value is an estimated quantity.
UJ = The analyte was analyzed for but was not detected above the level of the associated value. The associated value may not accurately or precisely represent the sample detection limit.

TABLE 6

SUMMARY OF DETECTED FIELD DUPLICATE DATA
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Investigative Sample SW-060494-WP-002 (mg/L)*	*Duplicate Sample SW-060494-WP-004 (mg/L)*	*RPD* [1]
Aluminum	1.5	1.6	6
Barium	0.059	0.059	0
Calcium	73	73	0
Iron	5.1	4.7	8
Magnesium	23	23	0
Manganese	1.1	1.1	0
Potassium	4.4	4.6	4
Sodium	33	33	0
Arsenic	0.012	0.012	0
Lead	0.0058	0.0059	2
Acetone	16 µg/L J [2]	ND(10) [3] µg/L UJ[4]	NC[5]

Parameter	*Investigative Sample SW-061594-WP-095 (mg/L)*	*Duplicate Sample SW-061594-WP-096 (mg/L)*	*RPD*
Aluminum	0.36	0.40	10
Barium	0.058	0.058	0
Calcium	89	88	1
Iron	3.5	3.7	5
Magnesium	21	21	0
Manganese	0.68	0.69	1
Potassium	5.6	5.5	2
Silver	0.016J	ND(0.010)UJ	NC
Sodium	21	21	0
Zinc	0.81	0.83	2
Acetone	12 µg/L	13 µg/L	8

TABLE 6

SUMMARY OF DETECTED FIELD DUPLICATE DATA
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Investigative Sample D-060494-WP-006 (mg/kg)*	*Duplicate Sample D-060494-WP-008 (mg/kg)*	*RPD*
Cyanide	0.67	0.57	16
Aluminum	11,000	9,900	10
Barium	39	39	0
Calcium	31,000	29,000	7
Chromium	28	22	24
Cobalt	6.5J	10J	42
Copper	27	25	8
Iron	21,000	21,000	0
Magnesium	16,000	15,000	6
Manganese	320	330	3
Nickel	34	30	12
Potassium	3,200J	2,200J	37
Vanadium	20	17	16
Zinc	130	130	0
Arsenic	5.6	5.7	2
Lead	22	23	4
Acetone	69 µg/kg J	24 µg/kg J	97
Methylene Chloride	8 µg/kg J	ND(5) µg/kg UJ	NC

TABLE 6

SUMMARY OF DETECTED FIELD DUPLICATE DATA
FOUR COUNTY LANDFILL SITE
FULTON COUNTY, INDIANA

Parameter	*Investigative Sample D-061594-WP-097 (mg/kg)*	*Duplicate Sample D-061594-WP-098 (mg/kg)*	*RPD*
TOC	330	440	28
Aluminum	11,000	7,700	35
Barium	33	30	9
Beryllium	0.60J	ND(0.50)UJ	NC
Calcium	4,200J	39,000J	160
Chromium	11	11	0
Cobalt	7.3	7.5	3
Copper	13	12	8
Iron	17,000	17,000	0
Magnesium	3,800J	12,000J	100
Manganese	210J	220J	5
Potassium	1,700	1,500	13
Zinc	69	62R[6]	11
Arsenic	6.1	5.7	7
Thallium	1.1 J	ND(1.0) UJ	NC
Lead	11	11	0
Vanadium	21	16	27
Methylene Chloride	9 µg/kg J	22 µg/kg J	84

1 RPD = Relative Percent Difference

2 J = The associated numerical value is an estimated quantity.

3 ND( ) = Not detected at the reporting limit listed in parentheses.

4 UJ = The analyte was analyzed for but was not detected above the level of the associated value. The associated value may not accurately or precisely represent the sample detection limit.

5 NC = Not calculable.

6 R = The analyte was analyzed for but the presence or absence of the analyte has not been verified. Resampling and reanalyses are necessary to confirm or deny the presence of the analyte.

SURFACE WATER

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313419
	Complete	PO Number	
	01-JUL-94	5369-50	
	Printed	Sampled	
	01-JUL-94	04-JUN-94 10:30	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-060494-WP-002
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 08-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: C. BOYLE Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 09-JUN-94 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 16-JUN-94 02:20 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	1.5	0.050	mg/L

 (continued on next page)

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.059	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	73.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	5.1	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	23.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	1.1	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.013	0.010	mg/L

prep blank was 0.010 mg/l

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	4.4	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	33.	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.052	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.012	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	0.0058	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: J. KRAMER Analysis Date: 13-JUN-94 08:45 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 14-JUN-94 09:10 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 11-JUN-94 13:50 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	16	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L

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Parameter	Result	Det. Limit	Units
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
SURROGATE RECOVERY			
DICHLOROETHANE-D4	103		% Rec
TOLUENE-D8	197		% Rec
4-BROMOFLUOROBENZENE	104		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 09-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 14-JUN-94 20:20 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L

Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	33		% Rec
PHENOL-D5	23		% Rec
NITROBENZENE-D5	61		% Rec
2-FLUOROBIPHENYL	63		% Rec
2,4,6-TRIBROMOPHENOL	55		% Rec
TERPHENYL-D14	70		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: L. WILLIAMS Analysis Date: 08-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1020		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	85.9		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3989/4002.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313420
	Complete	PO Number	
	01-JUL-94	5369-50	
	Printed	Sampled	
	01-JUL-94	04-JUN-94 11:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-060494-WP-004
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 08-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: C. BOYLE Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 09-JUN-94 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 16-JUN-94 02:20 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	1.6	0.050	mg/L

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ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.059	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	73.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	4.7	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	23.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	1.1	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.013	0.010	mg/L

prep blank was 0.010 mg/l

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	4.6	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	33.	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.037	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.012	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	0.0059	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: J. KRAMER Analysis Date: 13-JUN-94 08:45 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 14-JUN-94 09:10 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 11-JUN-94 14:31 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	108		% Rec
TOLUENE-D8	109		% Rec
4-BROMOFLUOROBENZENE	106		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 09-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 20-JUN-94 15:17 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	52		% Rec
PHENOL-D5	33		% Rec
NITROBENZENE-D5	81		% Rec
2-FLUOROBIPHENYL	97		% Rec
2,4,6-TRIBROMOPHENOL	64		% Rec
TERPHENYL-D14	101		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: L. WILLIAMS Analysis Date: 08-JUN-94 Test: PZ33.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1020		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	87.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3990/4002.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313421
	Complete	PO Number	
	01-JUL-94	5369-50	
	Printed	Sampled	
	01-JUL-94	04-JUN-94 11:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-060494-WP-027
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 08-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: C. BOYLE Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 09-JUN-94 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 16-JUN-94 02:20 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.21	0.050	mg/L

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ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.051	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	63.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	0.65	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	17.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.15	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1.1	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	2.2	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: J. KRAMER Analysis Date: 13-JUN-94 08:45 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 14-JUN-94 09:10 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 11-JUN-94 15:12 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	103		% Rec
TOLUENE-D8	103		% Rec
4-BROMOFLUOROBENZENE	101		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. FRANK Analysis Date: 09-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 20-JUN-94 16:08 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	33		% Rec
PHENOL-D5	25		% Rec
NITROBENZENE-D5	77		% Rec
2-FLUOROBIPHENYL	88		% Rec
2,4,6-TRIBROMOPHENOL	47		% Rec
TERPHENYL-D14	98		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: L. WILLIAMS Analysis Date: 08-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1050		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Unit
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	102.6		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3998/4002.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313422
	Complete	PO Number	
	01-JUL-94	5369-50	
	Printed	Sampled	
	01-JUL-94	04-JUN-94 14:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-060494-WP-035
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 08-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: C. BOYLE Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 09-JUN-94 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 16-JUN-94 02:20 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	BDL	0.050	mg/L

 (continued on next page)

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	BDL	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	0.046	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	BDL	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	BDL	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	BDL	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	0.24	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: J. KRAMER Analysis Date: 13-JUN-94 08:45 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 14-JUN-94 09:10 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 11-JUN-94 05:16 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	96		% Rec
TOLUENE-D8	105		% Rec
4-BROMOFLUOROBENZENE	100		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. FRANK Analysis Date: 09-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 20-JUN-94 16:59 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	58		% Rec
PHENOL-D5	39		% Rec
NITROBENZENE-D5	81		% Rec
2-FLUOROBIPHENYL	93		% Rec
2,4,6-TRIBROMOPHENOL	68		% Rec
TERPHENYL-D14	96		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: L. WILLIAMS Analysis Date: 08-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1040		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Un
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	85.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3999/4002.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313423
	Complete	PO Number	
	01-JUL-94	5369-50	
	Printed	Sampled	
	01-JUL-94	04-JUN-94 15:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-060494-WP-039
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 08-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: C. BOYLE Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 09-JUN-94 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 16-JUN-94 02:20 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.54	0.050	mg/L

 (continued on next page)

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.019	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	29.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	1.1	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	15.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.057	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 16-JUN-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.016	0.010	mg/L

prep blank was 0.010 mg/l

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2.0	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. NILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	4.5	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 10-JUN-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
LEAD	0.0034	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 09:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: J. KRAMER Analysis Date: 13-JUN-94 08:45 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 14-JUN-94 09:10 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 11-JUN-94 05:58 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	100		% Rec
TOLUENE-D8	107		% Rec
4-BROMOFLUOROBENZENE	103		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 09-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 20-JUN-94 17:50 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	51		% Rec
PHENOL-D5	38		% Rec
NITROBENZENE-D5	76		% Rec
2-FLUOROBIPHENYL	91		% Rec
2,4,6-TRIBROMOPHENOL	58		% Rec
TERPHENYL-D14	95		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: L. WILLIAMS Analysis Date: 08-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1030		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Un
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

HERITAGE ENVIRONMENTAL SERVICES, INC. **Lab Sample ID: A313423**

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	92.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4000/4002.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314356
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 09:10	

Report To	Bill To
DEBBIE GAGE CONESTOGA-ROVERS & ASSOCIATES, INC. O'HARE CORPORATE TOWERS ONE 10400 WEST HIGGINS ROAD, SUITE 103 ROSEMONT, IL 60018	ACCOUNTS PAYABLE CONESTOGA-ROVERS & ASSOC., INC. 10400 W. HIGGINS RD. ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-091
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A
Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012
Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	3.6	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.034	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	46.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	3.1	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	9.9	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.049	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.7	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	0.013	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	9.0	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.041	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 11:47 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	0.0073	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 24-JUN-94 13:14 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

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Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	104		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 08-JUL-94 11:47 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

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Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	55		% Rec
PHENOL-D5	32		% Rec
NITROBENZENE-D5	88		% Rec
2-FLUOROBIPHENYL	88		% Rec
2,4,6-TRIBROMOPHENOL	115		% Rec
TERPHENYL-D14	139		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. KEEZER Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Ur
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314356

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	98.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3555/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314357
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 09:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-092
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	4.2	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.036	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	47.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	3.5	0.025	mg/L

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MAGNESIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	10.	0.20	mg/L

MANGANESE ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.050	0.010	mg/L

NICKEL ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	6.2	0.20	mg/L

SILVER ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	0.012	0.010	mg/L

SODIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	9.3	0.20	mg/L

VANADIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.045	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A
Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 11:50 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Uni
LEAD	0.0036	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 24-JUN-94 13:56 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	99		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	101		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-JUL-94 20:16 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	42		% Rec
PHENOL-D5	25		% Rec
NITROBENZENE-D5	95		% Rec
2-FLUOROBIPHENYL	98		% Rec
2,4,6-TRIBROMOPHENOL	93		% Rec
TERPHENYL-D14	106		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. KEEZER Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Un
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

HERITAGE ENVIRONMENTAL SERVICES, INC. **Lab Sample ID: A314357**

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	58.6		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3565/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314358
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 09:45	

Report To	Bill To
DEBBIE GAGE CONESTOGA-ROVERS & ASSOCIATES, INC. O'HARE CORPORATE TOWERS ONE 10400 WEST HIGGINS ROAD, SUITE 103 ROSEMONT, IL 60018	ACCOUNTS PAYABLE CONESTOGA-ROVERS & ASSOC., INC. 10400 W. HIGGINS RD. ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-093
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	3.1	0.050	mg/L

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ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.030	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	45.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	2.7	0.025	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 11:53 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	0.0031	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SNAMP Analysis Date: 24-JUN-94 14:37 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

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MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	9.7	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.050	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.5	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	0.013	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	8.9	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.042	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	101		% Rec
TOLUENE-D8	101		% Rec
4-BROMOFLUOROBENZENE	103		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-JUL-94 21:07 Instrument: GC/MS SVOA Test: 0505.3.D

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	48		% Rec
PHENOL-D5	30		% Rec
NITROBENZENE-D5	102		% Rec
2-FLUOROBIPHENYL	103		% Rec
2,4,6-TRIBROMOPHENOL	73		% Rec
TERPHENYL-D14	106		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: M. KEEZER Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Un
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	82.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3553/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314359
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 13:05	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-094
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	BDL	0.050	mg/L

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ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	BDL	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	BDL	0.025	mg/L

MAGNESIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	BDL	0.20	mg/L

MANGANESE ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	BDL	0.010	mg/L

NICKEL ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.013	0.010	mg/L

POTASSIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	BDL	0.20	mg/L

SILVER ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	0.013	0.010	mg/L

SODIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	0.38	0.20	mg/L

VANADIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.020	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A
Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 11:38 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Unit
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 24-JUN-94 15:18 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	101		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	103		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-JUL-94 21:58 Instrument: GC/MS SVOA Test: Q505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	53		% Rec
PHENOL-D5	33		% Rec
NITROBENZENE-D5	109		% Rec
2-FLUOROBIPHENYL	108		% Rec
2,4,6-TRIBROMOPHENOL	94		% Rec
TERPHENYL-D14	122		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: N. KEEZER Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Ui
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

HERITAGE ENVIRONMENTAL SERVICES, INC. **Lab Sample ID: A314359**

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	81.6		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3575/3556.

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314360
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 13:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-095
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.36	0.050	mg/L

 (continued on next page)

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.058	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	89.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	3.5	0.025	mg/L

MAGNESIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	21.	0.20	mg/L

MANGANESE ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.68	0.010	mg/L

NICKEL ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.6	0.20	mg/L

SILVER ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	0.016	0.010	mg/L

SODIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	21.	0.20	mg/L

VANADIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.81	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A
Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 11:57 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 24-JUN-94 15:59 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	12	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	104		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-JUL-94 22:49 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	51		% Rec
PHENOL-D5	31		% Rec
NITROBENZENE-D5	85		% Rec
2-FLUOROBIPHENYL	84		% Rec
2,4,6-TRIBROMOPHENOL	97		% Rec
TERPHENYL-D14	99		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. MOWAT Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Unit
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	107.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3576/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314361
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 13:20	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-096
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.40	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.058	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	88.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	3.7	0.025	mg/L

 (continued on next page)

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	21.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.69	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.5	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	21.	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.83	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 12:00 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Unit
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 24-JUN-94 16:41 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	13	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

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Parameter	Result	Det. Limit	Units
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	100		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	103		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-JUL-94 23:40 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	51		% Rec
PHENOL-D5	31		% Rec
NITROBENZENE-D5	93		% Rec
2-FLUOROBIPHENYL	93		% Rec
2,4,6-TRIBROMOPHENOL	92		% Rec
TERPHENYL-D14	107		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. MOWAT Analysis Date: 17-JUN-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Unit
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L

Parameter	Result	Det. Limit	Units
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	92.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3577/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314362
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	20-JUL-94	15-JUN-94 15:15	

Report To	Bill To
DEBBIE GAGE CONESTOGA-ROVERS & ASSOCIATES, INC. O'HARE CORPORATE TOWERS ONE 10400 WEST HIGGINS ROAD, SUITE 103 ROSEMONT, IL 60018	ACCOUNTS PAYABLE CONESTOGA-ROVERS & ASSOC., INC. 10400 W. HIGGINS RD. ROSEMONT, IL 60018

Sample Description

SAMPLE ID: SW-061594-WP-099
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.01	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 29-JUN-94 14:30 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: . Analysis Date: 29-JUN-94 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	2.1	0.050	mg/L

 (continued on next page)

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.073	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	50.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	6.9	0.025	mg/L

MAGNESIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	13.	0.20	mg/L

MANGANESE ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.75	0.010	mg/L

NICKEL ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	6.3	0.20	mg/L

SILVER ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	6.4	0.20	mg/L

VANADIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.077	0.020	mg/L

prep blank was 0.023 mg/l

ARSENIC TRACE ICP SW846-6010A
Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 12:08 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	0.0068	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-JUL-94 13:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. BUCKNER Analysis Date: 27-JUN-94 12:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: K. BUCKNER Analysis Date: 28-JUN-94 08:00 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 25-JUN-94 16:01 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	22	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TOLUENE	9.6	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	100		% Rec
TOLUENE-D8	101		% Rec
4-BROMOFLUOROBENZENE	101		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 16-JUN-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 08-JUL-94 12:38 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	29		% Rec
PHENOL-D5	18		% Rec
NITROBENZENE-D5	91		% Rec
2-FLUOROBIPHENYL	95		% Rec
2,4,6-TRIBROMOPHENOL	92		% Rec
TERPHENYL-D14	99		% Rec

Sample reanalyzed with no improvement in internal standard areas.

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. MOWAT Analysis Date: 17-JUN-94 Test: P233.1.D

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	10		mL

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314362

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	.0005	mg/L
BETA-BHC	BDL	.0005	mg/L
DELTA-BHC	BDL	.0005	mg/L
GAMMA-BHC (LINDANE)	BDL	.0005	mg/L
HEPTACHLOR	BDL	.0005	mg/L
ALDRIN	BDL	.0005	mg/L
HEPTACHLOR EPOXIDE	BDL	.0005	mg/L
ENDOSULFAN I	BDL	.0005	mg/L
DIELDRIN	BDL	.001	mg/L
4,4'-DDE	BDL	.001	mg/L
ENDRIN	BDL	.001	mg/L
ENDOSULFAN II	BDL	.001	mg/L
4,4'-DDD	BDL	.001	mg/L
ENDOSULFAN SULFATE	BDL	.001	mg/L
4,4'-DDT	BDL	.001	mg/L
METHOXYCHLOR	BDL	.005	mg/L
ENDRIN ALDEHYDE	BDL	.001	mg/L
ENDRIN KETONE	BDL	.001	mg/L
ALPHA-CHLORDANE	BDL	.005	mg/L
GAMMA-CHLORDANE	BDL	.005	mg/L
TOXAPHENE	BDL	.01	mg/L
PCB AROCHLOR 1016	BDL	.005	mg/L
PCB AROCHLOR 1221	BDL	.005	mg/L
PCB AROCHLOR 1232	BDL	.005	mg/L
PCB AROCHLOR 1242	BDL	.005	mg/L
PCB AROCHLOR 1248	BDL	.005	mg/L
PCB AROCHLOR 1254	BDL	.01	mg/L
PCB AROCHLOR 1260	BDL	.01	mg/L
DECACHLOROBIPHENYL (DCB)	102.2		Percent

DILUTED 1:10 BECAUSE OF MATRIX INTERFERENCE.

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3558/3556.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	2940	A320790
	Complete	PO Number	
	23-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 12:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-111
PROJECT: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 01-SEP-94 16:00 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 07-SEP-94 16:00 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
ALUMINUM	5.0	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

 (continued on next page)

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
BARIUM	0.039	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	48.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit-
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	4.2	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	13.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.061	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.7	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	6.8	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.034	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 12-SEP-94 12:50 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	0.0054	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Uni
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: N. RENICK Analysis Date: 06-SEP-94 15:30 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 06-SEP-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-SEP-94 17:31 Instrument: GC/MS SVOA Test: O505.3.0
Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/l
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	58		% Rec
PHENOL-D5	37		% Rec
NITROBENZENE-D5	107		% Rec
2-FLUOROBIPHENYL	101		% Rec
2,4,6-TRIBROMOPHENOL	102		% Rec
TERPHENYL-D14	99		% Rec

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320790

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. JAYNE Analysis Date: 01-SEP-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	965		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DCB	98.2		Percent

Sample Comments

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	2940	A320792
	Complete	PO Number	
	23-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 08:50	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-106
PROJECT: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 01-SEP-94 16:00 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 07-SEP-94 16:00 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: N101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
ALUMINUM	BDL	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: N102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	BDL	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	BDL	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	0.31	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	BDL	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	BDL	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	0.27	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 12-SEP-94 12:50 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Unit
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: M. RENICK Analysis Date: 06-SEP-94 15:30 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.0050	mg/L

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 06-SEP-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-SEP-94 18:22 Instrument: GC/MS SVOA Test: O505.3.0
Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	63		% Rec
PHENOL-D5	39		% Rec
NITROBENZENE-D5	104		% Rec
2-FLUOROBIPHENYL	100		% Rec
2,4,6-TRIBROMOPHENOL	110		% Rec
TERPHENYL-D14	116		% Rec

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320792

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. JAYNE Analysis Date: 01-SEP-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	980		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DCB	63.2		Percent

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	2940	A320793
	Complete	PO Number	
	23-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 11:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-110
PROJECT: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 01-SEP-94 16:00 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 07-SEP-94 16:00 Test: P130.4.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Units
ALUMINUM	5.8	0.25	mg/L

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.040	0.010	mg/L

BERYLLIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	48.	0.20	mg/L

CHROMIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	4.3	0.025	mg/L

MAGNESIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	13.	0.20	mg/L

MANGANESE ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.061	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	5.8	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	6.8	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 07-SEP-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.031	0.020	mg/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 12-SEP-94 12:50 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.1

Parameter	Result	Det. Limit	Uni'
LEAD	0.0056	0.0030	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 02-SEP-94 11:30 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: M. RENICK Analysis Date: 06-SEP-94 15:30 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 06-SEP-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 07-SEP-94 19:14 Instrument: GC/MS SVOA Test: O505.3.0
Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	66		% Rec
PHENOL-D5	40		% Rec
NITROBENZENE-D5	103		% Rec
2-FLUOROBIPHENYL	100		% Rec
2,4,6-TRIBROMOPHENOL	109		% Rec
TERPHENYL-D14	126		% Rec

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320793

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: J. JAYNE Analysis Date: 01-SEP-94 Test: P233.1.0

Parameter	Result	Det. Limit	Unit
INITIAL WEIGHT OR VOLUME	1030		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DCB	83.0		Percent

Sample Comments

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320964
	Complete	PO Number	
	26-SEP-94	5369-50	
	Printed	Sampled	
	12-OCT-94	30-AUG-94 17:35	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-114
PROJECT: FOUR COUNTY LANDFILL

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

Analyst: D. NEWHART Analysis Date: 13-SEP-94 16:00 Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	50		mL

ALUMINUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	18.	0.050	mg/L

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.030	mg/L

BARIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.17	0.010	mg/L

 (continued on next page)

BERYLLIUM ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	63.	0.20	mg/L

CHROMIUM ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.024	0.010	mg/L

COBALT ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	0.022	0.010	mg/L

COPPER ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	0.048	0.020	mg/L

prep blank was 0.021 mg/l

IRON ICP SW846-6010A
Analyst: M. JAO Analysis Date: 16-SEP-94 08:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	55.	0.025	mg/L

MAGNESIUM ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	17.	0.20	mg/L

MANGANESE ICP SW846-6010A
Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	1.4	0.010	mg/L

NICKEL ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.032	0.010	mg/L

POTASSIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	8.6	0.20	mg/L

SILVER ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	3.7	0.20	mg/L

VANADIUM ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	0.039	0.010	mg/L

ZINC ICP SW846-6010A

Analyst: M. JAO Analysis Date: 14-SEP-94 08:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	0.29	0.020	mg/L

prep blank was 0.033 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 08:50 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.018	0.0050	mg/L

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 08:50 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	0.067	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 08:50 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 08:50 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: N. GLUNT Analysis Date: 07-SEP-94 11:00 Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7470

Analyst: T. REED, JR. Analysis Date: 09-SEP-94 10:25 Instrument: CVAA Test: M120.1.0

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470 P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00050	mg/L

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 13-SEP-94 09:45 Instrument: GC/MS VOA Test: O510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	27	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	2.3	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	2.3	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	6.1	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L
...			
SURROGATE RECOVERY			

Parameter	Result	Det. Limit	Units
DICHLOROETHANE-D4	103		% Rec
TOLUENE-D8	101		% Rec
4-BROMOFLUOROBENZENE	98		% Rec

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: C. KING Analysis Date: 06-SEP-94 Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 09-SEP-94 12:06 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMODIPHENYL ETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYL-PHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	10	ug/L
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	10	ug/L
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	50	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE (O-NITROANILINE)	BDL	50	ug/L

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Parameter	Result	Det. Limit	Units
3-NITROANILINE (M-NITROANILINE)	BDL	50	ug/L
4-NITROANILINE (P-NITROANILINE)	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSODIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
PYRENE	BDL	10	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-O-CRESOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL (O-CRESOL)	BDL	10	ug/L
4-METHYLPHENOL (P-CRESOL)	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
...			
SURROGATE RECOVERY			

2-FLUOROPHENOL	79		% Rec
PHENOL-D5	43		% Rec
NITROBENZENE-D5	80		% Rec
2-FLUOROBIPHENYL	58		% Rec
2,4,6-TRIBROMOPHENOL	93		% Rec
TERPHENYL-D14	84		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

Analyst: E. BINGHAM Analysis Date: 02-SEP-94 Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	920		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.00005	mg/L
BETA-BHC	BDL	0.00005	mg/L
DELTA-BHC	BDL	0.00005	mg/L
GAMMA-BHC (LINDANE)	BDL	0.00005	mg/L
HEPTACHLOR	BDL	0.00005	mg/L
ALDRIN	BDL	0.00005	mg/L
HEPTACHLOR EPOXIDE	BDL	0.00005	mg/L
ENDOSULFAN I	BDL	0.00005	mg/L
DIELDRIN	BDL	0.0001	mg/L
4,4'-DDE	BDL	0.0001	mg/L
ENDRIN	BDL	0.0001	mg/L
ENDOSULFAN II	BDL	0.0001	mg/L
4,4'-DDD	BDL	0.0001	mg/L
ENDOSULFAN SULFATE	BDL	0.0001	mg/L

Parameter	Result	Det. Limit	Units
4,4'-DDT	BDL	0.0001	mg/L
METHOXYCHLOR	BDL	0.0005	mg/L
ENDRIN ALDEHYDE	BDL	0.0001	mg/L
ENDRIN KETONE	BDL	0.0001	mg/L
ALPHA-CHLORDANE	BDL	0.0005	mg/L
GAMMA-CHLORDANE	BDL	0.0005	mg/L
TOXAPHENE	BDL	0.001	mg/L
PCB AROCHLOR 1016	BDL	0.0005	mg/L
PCB AROCHLOR 1221	BDL	0.0005	mg/L
PCB AROCHLOR 1232	BDL	0.0005	mg/L
PCB AROCHLOR 1242	BDL	0.0005	mg/L
PCB AROCHLOR 1248	BDL	0.0005	mg/L
PCB AROCHLOR 1254	BDL	0.0010	mg/L
PCB AROCHLOR 1260	BDL	0.0010	mg/L
DECACHLOROBIPHENYL (DCB)	48		Percent

SULFUR INTERFERENCES REMOVED USING THE MERCURY CLEAN UP TECHNIQUE.

Sample Comments

Amended report: 2-butanone was deleted from test code 0510.6. nlh 12-Oct-94.

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320965
	Complete	PO Number	
	26-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 08:50	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-106
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 13-SEP-94 10:26 Instrument: GC/MS VOA Test: 0510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	11	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320965

Parameter	Result	Det. Limit	Units
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	107		% Re
TOLUENE-D8	101		% Rec
4-BROMOFLUOROBENZENE	104		% Rec

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320966
	Complete	PO Number	
	26-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 11:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-110
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 13-SEP-94 11:07 Instrument: GC/MS VOA Test: 0510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	2.1	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320966

Parameter	Result	Det. Limit	Units
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	103		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	103		% Rec

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320967
	Complete	PO Number	
	26-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94 12:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-111
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 13-SEP-94 11:49 Instrument: GC/MS VOA Test: 0510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	1.6	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320967

Parameter	Result	Det. Limit	Units
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	107		% Rec
TOLUENE-D8	101		% Rec
4-BROMOFLUOROBENZENE	107		% Rec

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320968
	Complete	PO Number	
	26-SEP-94	5369-50	
	Printed	Sampled	
	26-SEP-94	30-AUG-94	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: SW-083094-KJJ-112
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst: R. SHAMP Analysis Date: 13-SEP-94 14:33 Instrument: GC/MS VOA Test: 0510.6.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	10	ug/L
BENZENE	BDL	1	ug/L
BROMODICHLOROMETHANE	BDL	1	ug/L
BROMOFORM	BDL	1	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	1	ug/L
CARBON TETRACHLORIDE	BDL	1	ug/L
CHLOROBENZENE	BDL	1	ug/L
CHLOROETHANE	BDL	1	ug/L
CHLOROFORM	BDL	1	ug/L
CHLOROMETHANE	BDL	1	ug/L
DIBROMOCHLOROMETHANE	BDL	1	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1-DICHLOROETHANE	BDL	1	ug/L
1,2-DICHLOROETHANE	BDL	1	ug/L
1,1-DICHLOROETHENE	BDL	1	ug/L
1,2-DICHLOROPROPANE	BDL	1	ug/L
ETHYL BENZENE	BDL	1	ug/L
2-HEXANONE	BDL	10	ug/L
DICHLOROMETHANE (METHYLENE CHLORIDE)	2.0	1	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	1	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	1	ug/L
TETRACHLOROETHENE	BDL	1	ug/L
TOLUENE	BDL	1	ug/L
TRANS-1,2-DICHLOROETHENE	BDL	1	ug/L
CIS-1,2-DICHLOROETHENE	BDL	1	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	1	ug/L
1,1,1-TRICHLOROETHANE	BDL	1	ug/L
1,1,2-TRICHLOROETHANE	BDL	1	ug/L
TRICHLOROETHENE	BDL	1	ug/L
VINYL CHLORIDE	BDL	1	ug/L
XYLENES (O/M/P-XYLENE)	BDL	1	ug/L

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320968

Parameter	Result	Det. Limit	Units
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	103		% Rec
4-BROMOFLUOROBENZENE	105		% Rec

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

SEDIMENT

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313424
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 11:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-002
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	1100	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	53	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.47	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313424

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	10000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	19000	47.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	57.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	41.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	77.	1.9	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.94	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	4.7	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	21000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	40000	190	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	20.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	38.	9.4	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	4.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	8.1	1.9	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	18.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	34.	19.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	15000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	28000	24.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	11000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	21000	190	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Uni
MANGANESE	150	1.0	mg/k
DRY WEIGHT CORRECTED RESULT	280	1.9	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	17.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	9.4	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2300	100	mg/kg
DRY WEIGHT CORRECTED RESULT	4300	190	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/k
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	71.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	130	38.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	8.9	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	1.9	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	130	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	240	19.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	4.8	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	9.0	0.94	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.94	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	30.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	57.	0.94	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: R. SHAMP Analysis Date: 08-JUN-94 13:39 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	EST 410	50	ug/kg
DRY WEIGHT CORRECTED RESULT	EST 770	94.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg

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Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.4	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	114		% Rec
TOLUENE-D8	116		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	114		% Rec

Dilution necessary due to high concentration of target compounds.

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 11-JUN-94 17:02 Instrument: GC/MS VOA Test: 0510.9.1

Parameter	Result	Det. Limit	Units
ACETONE	430	100	ug/kg
DRY WEIGHT CORRECTED RESULT	810	190	ug/kg
ACROLEIN	BDL	250	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	470	ug/kg
ACRYLONITRILE	BDL	350	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	660	ug/kg
BENZENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
BROMODICHLOROMETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
BROMOFORM	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
BROMOMETHANE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
CARBON DISULFIDE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
CARBON TETRACHLORIDE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
CHLOROBENZENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
CHLOROETHANE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
CHLOROFORM	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
CHLOROMETHANE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
DIBROMOCHLOROMETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
DICHLORODIFLUOROMETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,1-DICHLOROETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,2-DICHLOROETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,1-DICHLOROETHENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,2-DICHLOROPROPANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
ETHYL BENZENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
TRICHLOROFLUOROMETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg

 (continued on next page

Parameter	Result	Det. Limit	Units
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
STYRENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
TETRACHLOROETHENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
TETRAHYDROFURAN	BDL	120	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	230	ug/kg
TOLUENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,1,1-TRICHLOROETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
1,1,2-TRICHLOROETHANE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
TRICHLOROETHENE	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
VINYL ACETATE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
VINYL CHLORIDE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	94.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	25	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	47.	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	112		% Rec
TOLUENE-D8	117		% Rec
4-BROMOFLUOROBENZENE	92		% Rec

1:5 Dilution necessary due to high concentration of target compounds.

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.04		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 15-JUN-94 13:47 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg

Parameter	Result	Det. Limit	Units
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1200	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/
PYRENE	BDL	330	ug/
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg

Parameter	Result	Det. Limit	Units
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	620	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	93		% Rec
PHENOL-D5	89		% Rec
NITROBENZENE-D5	76		% Rec
2-FLUOROBIPHENYL	78		% Rec
2,4,6-TRIBROMOPHENOL	71		% Rec
TERPHENYL-D14	85		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg
DECACHLOROBIPHENYL (DCB)	132.8		Percent

Sample Comments

BDL Below Detection Limit
EST Estimated Value

Sample chain of custody number 3991.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313426
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 12:15	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-004
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	52	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.48	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	4100	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	7900	48.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	58.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	22.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	42.	1.9	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.79	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	1.5	0.96	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	4.8	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	21000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	40000	190	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	8.8	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	9.6	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	9.2	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	1.9	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	12.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	23.	19.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	8700	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	17000	25.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	12000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	23000	190	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	340	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	650	1.9	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	12.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	23.	9.6	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	940	100	mg/kg
DRY WEIGHT CORRECTED RESULT	1800	190	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	120	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	230	38.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	19.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	36.	1.9	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	70.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	130	19.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	2.8	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	5.4	0.96	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	10.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	19.	0.96	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 09-JUN-94 15:24 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	96.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg

Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	96.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	12	5	ug/kg
DRY WEIGHT CORRECTED RESULT	23.	9.6	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	96.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	96.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	9.6	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	113		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	79		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: PZ36.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.26		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 15-JUN-94 14:42 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 PZ36.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BENZYLBUTYLPHTHALATE	1100	330	ug/kg
DRY WEIGHT CORRECTED RESULT	2100	630	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/k
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3100	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	630	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	81		% Rec
PHENOL-D5	83		% Rec
NITROBENZENE-D5	74		% Rec
2-FLUOROBIPHENYL	78		% Rec
2,4,6-TRIBROMOPHENOL	85		% Rec
TERPHENYL-D14	87		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
DIELDRIN	BDL	0.016	mg/kg

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. **Lab Sample ID: A313426**

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg
PCB AROCHLOR 1254	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
PCB AROCHLOR 1260	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
DECACHLOROBIPHENYL (DCB)	122.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3991.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313427
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 12:40	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-006
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	41	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.67	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	1.6	0.61	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	11000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	27000	61.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	73.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	39.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	95.	2.4	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M106.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	31000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	76000	240	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	28.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	68.	12.	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	6.5	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	16.	2.4	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	27.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	66.	24.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	21000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	51000	32.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	16000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	39000	240	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Un
MANGANESE	320	1.0	mg/k
DRY WEIGHT CORRECTED RESULT	780	2.4	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	34.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	83.	12.	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	3200	100	mg/kg
DRY WEIGHT CORRECTED RESULT	7800	240	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg
DRY WEIGHT CORRECTED RESULT	BDL	2.4	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	120	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	290	49.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	49.	2.4	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	130	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	320	24.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.6	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	14.	1.2	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.4	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	22.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	54.	1.2	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.29	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 09-JUN-94 17:44 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	69	20	ug/kg
DRY WEIGHT CORRECTED RESULT	170	49.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg

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Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	120	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	8	5	ug/kg
DRY WEIGHT CORRECTED RESULT	20.	12.	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	120	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	120	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	102		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	94		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.66		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 15-JUN-94 15:36 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1600	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	3900	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
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SURROGATE RECOVERY			

2-FLUOROPHENOL	79		% Rec
PHENOL-D5	80		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	72		% Rec
2,4,6-TRIBROMOPHENOL	54		% Rec
TERPHENYL-D14	79		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DIELDRIN	BDL	0.016	mg/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.39	mg/kg
DECACHLOROBIPHENYL (DCB)	114.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3991.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313428
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 13:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-008
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	75	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.57	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	0.76	0.33	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

 (continued on next page)

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	9900	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	13000	33.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	40.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	39.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	52.	1.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.67	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.3	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	29000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	39000	130	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	22.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	6.7	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	10.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	1.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	25.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	33.	13.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	21000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	28000	17.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	15000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	20000	130	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	330	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	440	1.3	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	30.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	40.	6.7	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2200	100	mg/kg
DRY WEIGHT CORRECTED RESULT	2900	130	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	100	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	130	27.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	17.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	23.	1.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	130	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	170	13.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.7	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.6	0.67	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.67	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	23.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	31.	0.67	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.16	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 09-JUN-94 18:30 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	24	20	ug/kg
DRY WEIGHT CORRECTED RESULT	32.	27.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	116		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	83		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.39		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 15-JUN-94 16:30 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	880	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	85		% Rec
PHENOL-D5	81		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	69		% Rec
2,4,6-TRIBROMOPHENOL	58		% Rec
TERPHENYL-D14	83		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DIELDRIN	BDL	0.016	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313428

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DECACHLOROBIPHENYL (DCB)	112.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3991.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313429
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 13:45	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-010
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	77	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.74	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	0.96	0.32	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	12000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	32.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	39.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	38.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	49.	1.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.53	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.69	0.65	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.2	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	36000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	47000	130	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	26.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	34.	6.5	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	10.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	1.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	24.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	31.	13.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	22000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	28000	17.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	19000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	130	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	380	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	490	1.3	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	30.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	39.	6.5	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	3300	100	mg/kg
DRY WEIGHT CORRECTED RESULT	4300	130	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	130	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	170	26.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	21.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	27.	1.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	130	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	170	13.	mg/kg

DILUTION 1:2

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	6.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	8.2	0.65	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.65	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	24.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	31.	0.65	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.16	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 09-JUN-94 19:17 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	26.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg

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Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
2-HEXANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	15	5	ug/kg
DRY WEIGHT CORRECTED RESULT	19.	6.5	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	90		% Rec
TOLUENE-D8	121		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	84		% Rec

Sample reanalyzed with no improvement in surrogate recovery.
Sample reanalyzed with no improvement in internal standard areas.

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.38		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 12:31 Instrument: GC/MS SVOA Test: 0505.3.0
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg

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Parameter	Result	Det. Limit	Units
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	860	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/k
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	69		% Rec
PHENOL-D5	72		% Rec
NITROBENZENE-D5	62		% Rec
2-FLUOROBIPHENYL	70		% Rec
2,4,6-TRIBROMOPHENOL	58		% Rec
TERPHENYL-D14	79		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg

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Parameter	Result	Det. Limit	Units
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/k
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DECACHLOROBIPHENYL (DCB)	106.6		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3992.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313430
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 14:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-012
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	75	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	1.1	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	1.5	0.33	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313430

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	11000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	15000	33.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	40.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	34.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	45.	1.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.53	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.71	0.67	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.3	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	38000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	51000	130	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	25.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	33.	6.7	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	10.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	1.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	24.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	13.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	23000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	31000	17.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	19000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	130	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	400	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	530	1.3	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	30.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	40.	6.7	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2500	100	mg/kg
DRY WEIGHT CORRECTED RESULT	3300	130	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	100	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	130	27.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	19.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	25.	1.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	150	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	200	13.	mg/kg

DILUTION 1:5

 (continued on next page)

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	6.5	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	8.7	0.67	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.67	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	28.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	37.	0.67	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.16	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 09-JUN-94 22:23 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	33	20	ug/kg
DRY WEIGHT CORRECTED RESULT	44.	27.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	67.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.7	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	114		% Rec
TOLUENE-D8	113		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	84		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.13		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 13:25 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BENZYLBUTYLPHTHALATE	410	330	ug/kg
DRY WEIGHT CORRECTED RESULT	550	440	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	880	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	440	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	87		% Rec
PHENOL-D5	89		% Rec
NITROBENZENE-D5	74		% Rec
2-FLUOROBIPHENYL	79		% Rec
2,4,6-TRIBROMOPHENOL	64		% Rec
TERPHENYL-D14	89		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: Q305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DIELDRIN	BDL	0.016	mg/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DECACHLOROBIPHENYL (DCB)	120.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3992.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313431
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 14:30	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-014
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	88	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 10-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	1.8	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	2.0	0.28	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	5800	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	6600	28.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.4	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	23.	1.1	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.57	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.8	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	52000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	59000	110	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	13.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	15.	5.7	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	6.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.2	1.1	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	14.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	16.	11.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	13000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	15000	15.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	24000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	27000	110	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
MANGANESE	360	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	410	1.1	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	15.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	5.7	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1500	100	mg/kg
DRY WEIGHT CORRECTED RESULT	1700	110	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
SILVER	BDL	1.0	mg/
DRY WEIGHT CORRECTED RESULT	BDL	1.1	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	100	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	110	23.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	12.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	14.	1.1	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	120	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	140	11.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	4.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	4.9	0.57	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.57	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.1	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	21.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	24.	0.57	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.14	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 10-JUN-94 08:47 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	34	20	ug/kg
DRY WEIGHT CORRECTED RESULT	39.	23.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	11.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg

Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	11.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	11.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	57.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	15	5	ug/kg
DRY WEIGHT CORRECTED RESULT	17.	5.7	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	57.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	57.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
TOLUENE	13	5	ug/kg
DRY WEIGHT CORRECTED RESULT	15.	5.7	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	11.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.7	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	105		% Rec
TOLUENE-D8	106		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	94		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.86		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 14:19 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	750	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/l
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1800	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	380	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	78		% Rec
PHENOL-D5	79		% Rec
NITROBENZENE-D5	71		% Rec
2-FLUOROBIPHENYL	84		% Rec
2,4,6-TRIBROMOPHENOL	73		% Rec
TERPHENYL-D14	95		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
DIELDRIN	BDL	0.016	mg/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.91	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.18	mg/kg
DECACHLOROBIPHENYL (DCB)	114.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3992.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313432
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 15:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-016
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	80	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 09-JUN-94 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 09-JUN-94 16:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.58	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	0.72	0.31	mg/kg

1:2 Dilution due to matrix interference.

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	13000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	31.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	26.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.53	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.66	0.62	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.1	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	39000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	49000	120	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	22.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	6.2	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	8.7	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	22.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	12.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	20000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	16.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	20000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	120	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	380	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	480	1.2	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	41.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	51.	6.2	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	3700	100	mg/kg
DRY WEIGHT CORRECTED RESULT	4600	120	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	170	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	210	25.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	22.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	130	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	160	12.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	6.0	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.5	0.62	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	23.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	0.62	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 11-JUN-94 13:10 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	25.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg

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Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
2-HEXANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	87		% Rec
TOLUENE-D8	96		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	109		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: PZ36.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.87		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 15:13 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZYLBUTYLPHTHALATE	650	330	ug/kg
DRY WEIGHT CORRECTED RESULT	810	410	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/k
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	820	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/k
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/l
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	60		% Rec
PHENOL-D5	59		% Rec
NITROBENZENE-D5	52		% Rec
2-FLUOROBIPHENYL	55		% Rec
2,4,6-TRIBROMOPHENOL	48		% Rec
TERPHENYL-D14	64		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
DIELDRIN	BDL	0.016	mg/kg

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313432

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/k
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/k
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DECACHLOROBIPHENYL (DCB)	99.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3992.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313433
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 11:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-029
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	480	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	38	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 13-JUN-94 09:20 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 13-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.66	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	3000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	7900	66.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.9	mg/kg

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	25.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	66.	2.6	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
CALCIUM	7300	100	mg/kg
DRY WEIGHT CORRECTED RESULT	19000	260	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	6.3	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	16.	13.	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	2.7	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.1	2.6	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	26.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	4000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	10000	34.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	2600	100	mg/kg
DRY WEIGHT CORRECTED RESULT	6800	260	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	65.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	170	2.6	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
NICKEL	8.8	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	23.	13.	mg/kg

DILUTION 1:5
prep blank was 0.010 mg/l

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	420	100	mg/kg
DRY WEIGHT CORRECTED RESULT	1100	260	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.6	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Uni
SODIUM	31.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	82.	53.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	6.9	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	2.6	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	33.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	87.	26.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.60	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	1.6	1.3	mg/k

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.74	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	1.9	1.3	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.6	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	6.5	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	1.3	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.32	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 10-JUN-94 11:53 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	49	20	ug/kg
DRY WEIGHT CORRECTED RESULT	130	53.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	26.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	26.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROMETHANE	BDL	10	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	26.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	130	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	130	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	130	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	26.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	101		% Rec
TOLUENE-D8	81		% Rec
4-BROMOFLUOROBENZENE	83		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.61		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 19:44 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg

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Parameter	Result	Det. Limit	Units
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1700	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
ISOPHORONE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/k
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4200	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	870	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	85		% Rec
PHENOL-D5	91		% Rec
NITROBENZENE-D5	75		% Rec
2-FLUOROBIPHENYL	79		% Rec
2,4,6-TRIBROMOPHENOL	76		% Rec
TERPHENYL-D14	95		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg

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Parameter	Result	Det. Limit	Units
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.42	mg/kg
DECACHLOROBIPHENYL (DCB)	129.0		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4001.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313434
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 12:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-031
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	82	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 13-JUN-94 09:20 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 13-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 15-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	10000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	12000	30.	mg/kg

DILUTION 1:5

ANTIMONY ICP SW846-6010A

Analyst: M. JAO Analysis Date: 20-JUN-94 08:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.6	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 16-JUN-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
BARIUM	67.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	82.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.61	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.0	mg/kg

DILUTION 1:5

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	25000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	30000	120	mg/kg

DILUTION 1:5

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	24.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	6.1	mg/kg

DILUTION 1:5

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	9.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	27.	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	33.	12.	mg/kg

DILUTION 1:5

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	19000	13.	mg/kg
DRY WEIGHT CORRECTED RESULT	23000	16.	mg/kg

DILUTION 1:5

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	13000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	120	mg/kg

DILUTION 1:5

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
MANGANESE	1600	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	2000	1.2	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	26.	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	6.1	mg/kg

DILUTION 1:5

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2000	100	mg/kg
DRY WEIGHT CORRECTED RESULT	2400	120	mg/kg

DILUTION 1:5

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	240	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	290	24.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	18.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	22.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	170	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	210	12.	mg/kg

DILUTION 1:5

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.9	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.2	0.61	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.61	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 13:10 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	36.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	44.	0.61	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 10-JUN-94 12:39 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg

 (continued on next page

Parameter	Result	Det. Limit	Units
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	6	5	ug/kg
DRY WEIGHT CORRECTED RESULT	7.3	6.1	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	88		% Rec
TOLUENE-D8	97		% Rec

Parameter	Result	Det. Limit	Units
4-BROMOFLUOROBENZENE	94		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: PZ36.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.87		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 16:07 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 PZ36.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg

Parameter	Result	Det. Limit	Units
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	78		% Rec
PHENOL-D5	83		% Rec
NITROBENZENE-D5	73		% Rec
2-FLUOROBIPHENYL	84		% Rec
2,4,6-TRIBROMOPHENOL	77		% Rec
TERPHENYL-D14	96		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
DIELDRIN	BDL	0.016	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313434

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DECACHLOROBIPHENYL (DCB)	98.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4001.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313435
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 12:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-033
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	83	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 13-JUN-94 09:20 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 13-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.31	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	0.37	0.30	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	15000	50.	mg/kg
DRY WEIGHT CORRECTED RESULT	18000	60.	mg/kg

DILUTION 1:10

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	150	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	180	mg/kg

DILUTION 1:50

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	59.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	71.	1.2	mg/

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.79	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.95	0.60	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.60	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	21000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	24.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	28.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	34.	1.2	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	9.8	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	12.	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	28.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	34.	2.4	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	24000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	29000	30.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	13000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	24.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	670	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	810	1.2	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	27.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	1.2	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2900	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	3500	24.	mg/kg

 (continued on next page)

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	250	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	300	24.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	26.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	31.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M139.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	160	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	190	2.4	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M103.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	7.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	8.8	0.60	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M128.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.60	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M134.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	35.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	42.	0.60	mg/kg

 (continued on next page)

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.14	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: M. WILLIAMS Analysis Date: 10-JUN-94 13:26 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	24.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	9	5	ug/kg
DRY WEIGHT CORRECTED RESULT	11.	6.0	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	97		% Rec
TOLUENE-D8	99		% Rec
4-BROMOFLUOROBENZENE	95		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.20		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 17:01 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/k
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg

Parameter	Result	Det. Limit	Units
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	u
DRY WEIGHT CORRECTED RESULT	BDL	400	u
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg

Parameter	Result	Det. Limit	Units
SURROGATE RECOVERY			
2-FLUOROPHENOL	79		% Rec
PHENOL-D5	81		% Rec
NITROBENZENE-D5	74		% Rec
2-FLUOROBIPHENYL	79		% Rec
2,4,6-TRIBROMOPHENOL	77		% Rec
TERPHENYL-D14	89		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313435

Parameter	Result	Det. Limit	Units
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
DECACHLOROBIPHENYL (DCB)	123.2		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4001.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313436
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 14:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-037
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	69	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 13-JUN-94 09:20 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 13-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.36	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313436

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	11000	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	14.	mg/kg

DILUTION 1:2

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	150	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	220	mg/kg

DILUTION 1:50

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	54.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	78.	1.4	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.72	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.72	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	9100	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	13000	29.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	1.4	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	7.4	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	1.4	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	19.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	2.9	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	16000	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	23000	7.2	mg/kg

DILUTION 1:2

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	6600	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	9600	29.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	430	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	620	1.4	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	19.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	1.4	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2900	29.	mg/kg

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SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.4	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	150	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	220	29.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	1.4	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	120	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	170	2.9	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.2	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.5	0.72	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.72	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.4	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	26.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	38.	0.72	mg/kg

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MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.17	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 11-JUN-94 15:30 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	29.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
2-HEXANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7.2	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	112		% Rec
TOLUENE-D8	113		% Rec
4-BROMOFLUOROBENZENE	94		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.83		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 16-JUN-94 17:56 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	960	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg

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Parameter	Result	Det. Limit	Units
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2300	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	480	ug/kg

Parameter	Result	Det. Limit	Units
SURROGATE RECOVERY			
2-FLUOROPHENOL	88		% Rec
PHENOL-D5	92		% Rec
NITROBENZENE-D5	80		% Rec
2-FLUOROBIPHENYL	86		% Rec
2,4,6-TRIBROMOPHENOL	92		% Rec
TERPHENYL-D14	103		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 PZ36.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. **Lab Sample ID: A313436**

Parameter	Result	Det. Limit	Units
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.12	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.23	mg/kg
DECACHLOROBIPHENYL (DCB)	124.6		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4001.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	2940	A313437
	Complete	PO Number	
	08-JUL-94	5369	
	Printed	Sampled	
	08-JUL-94	04-JUN-94 15:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-060494-WP-041
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 08-JUN-94 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 06-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	72	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 13-JUN-94 09:20 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 13-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313437

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	6900	50.	mg/kg
DRY WEIGHT CORRECTED RESULT	9600	69.	mg/kg

DILUTION 1:10

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	42.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	28.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	39.	1.4	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.69	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	mg/kg

DILUTION 1:10

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	28000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	39000	28.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	13.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	1.4	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	8.0	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	1.4	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	16.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	22.	2.8	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 14-JUN-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	17000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	24000	35.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	14000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	19000	28.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	350	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	490	1.4	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	19.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	1.4	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1400	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	1900	28.	mg/kg

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SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.4	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	81.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	110	28.	mg/kg

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	13.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	1.4	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 13-JUN-94 21:43 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	81.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	110	2.8	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.4	0.69	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.69	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.4	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 21-JUN-94 15:17 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	16.	0.50	mg/k
DRY WEIGHT CORRECTED RESULT	22.	0.69	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 16-JUN-94 13:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: J. KRAMER Analysis Date: 16-JUN-94 05:45 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.17	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: H. WILLIAMS Analysis Date: 10-JUN-94 15:00 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	31	20	ug/kg
DRY WEIGHT CORRECTED RESULT	43.	28.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	69.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	69.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	69.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	14.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.9	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	85		% Rec
TOLUENE-D8	83		% Rec
4-BROMOFLUOROBENZENE	89		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: L. WILLIAMS Analysis Date: 09-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.47		Grams
FINAL VOLUME	10		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 11-JUN-94 14:05 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	920	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2200	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	460	ug/kg

Parameter	Result	Det. Limit	Units
SURROGATE RECOVERY			
2-FLUOROPHENOL	64		% Rec
PHENOL-D5	67		% Rec
NITROBENZENE-D5	55		% Rec
2-FLUOROBIPHENYL	60		% Rec
2,4,6-TRIBROMOPHENOL	65		% Rec
TERPHENYL-D14	50		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 PZ36.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313437

Parameter	Result	Det. Limit	Units
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.11	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.22	mg/kg
DECACHLOROBIPHENYL (DCB)	121.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 4001.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314365
	Complete	PO Number	
	14-JUL-94	5369-50	
	Printed	Sampled	
	18-JUL-94	15-JUN-94 13:30	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-061594-WP-097
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 21-JUN-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	330	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: A. WOOD Analysis Date: 17-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	82	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-JUL-94 11:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 08-JUL-94 13:00 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	11000	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13000	6.1	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	300	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	360	mg/kg

DILUTION 1:100

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	33.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	40.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.60	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.73	0.61	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	mg/kg

DILUTION 1:10

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
CALCIUM	4200	200	mg/kg
DRY WEIGHT CORRECTED RESULT	5100	240	mg/kg

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DILUTION 1:10

CHROMIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	1.2	mg/kg

COBALT ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	7.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	8.9	1.2	mg/kg

COPPER ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	13.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	16.	2.4	mg/kg

IRON ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	17000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	21000	30.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	3800	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	4600	24.	mg/kg

MANGANESE ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	210	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	260	1.2	mg/kg

Sample not homogeneous for Mn. Bad RPD for 2 digestions.

NICKEL ICP SW846-6010A
Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
NICKEL	12.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	15.	1.2	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
POTASSIUM	1700	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2100	24.	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	71.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	86.	24.	mg/kg

prep blank was 0.35 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	21.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ZINC	69.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	84.	2.4	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 08-JUL-94 17:40 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ARSENIC	6.1	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.4	0.61	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.61	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Uni
THALLIUM	1.1	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	1.3	1.2	mg/kg

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LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	11.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	0.61	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 22-JUN-94 12:50 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 23-JUN-94 09:42 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 27-JUN-94 16:21 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg

Parameter	Result	Det. Limit	Units
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	9	5	ug/kg
DRY WEIGHT CORRECTED RESULT	11.	6.1	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	61.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.1	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	99		% Rec
TOLUENE-D8	114		% Rec
4-BROMOFLUOROBENZENE	82		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 22-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.06		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 30-JUN-94 14:51 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg

Parameter	Result	Det. Limit	Units
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	800	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
FLUORENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg

Parameter	Result	Det. Limit	Units
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	400	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	70		% Rec
PHENOL-D5	75		% Rec
NITROBENZENE-D5	70		% Rec
2-FLUOROBIPHENYL	75		% Rec
2,4,6-TRIBROMOPHENOL	59		% Rec
TERPHENYL-D14	83		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314365

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.98	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DECACHLOROBIPHENYL (DCB)	118.0		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3557.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314366
	Complete	PO Number	
	14-JUL-94	5369-50	
	Printed	Sampled	
	18-JUL-94	15-JUN-94 13:35	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-061594-WP-098
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 21-JUN-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	440	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: A. WOOD Analysis Date: 17-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	81	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	mg/kg

1:2 Dilution due to matrix interference.

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-JUL-94 11:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 08-JUL-94 13:00 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	7700	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	9500	6.2	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	300	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	370	mg/kg

DILUTION 1:100

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	30.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	37.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	mg/kg

DILUTION 1:10

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
CALCIUM	39000	200	mg/kg
DRY WEIGHT CORRECTED RESULT	48000	250	mg/kg

 (continued on next page)

DILUTION 1:10

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M110.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	14.	1.2	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	7.5	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	9.2	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	12.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	15.	2.5	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M115.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	17000	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	21000	31.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	12000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	15000	25.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M119.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	220	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	270	1.2	mg/kg

Sample not homogeneous for Mn. Bad RPD for 2 digestions.

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M122.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
NICKEL	12.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	15.	1.2	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1500	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	1800	25.	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	84.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	100	25.	mg/kg

prep blank was 0.35 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	16.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	20.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ZINC	62.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	76.	2.5	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 08-JUL-94 17:40 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ARSENIC	5.7	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.0	0.62	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	11	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	14.	0.62	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 22-JUN-94 12:50 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 23-JUN-94 09:42 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.15	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 27-JUN-94 17:06 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	62.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	62.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	22	5	ug/kg
DRY WEIGHT CORRECTED RESULT	27.	6.2	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	62.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	62.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.2	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	97		% Rec
TOLUENE-D8	111		% Rec
4-BROMOFLUOROBENZENE	85		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 22-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.99		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 30-JUN-94 15:44 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg

Parameter	Result	Det. Limit	Units
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	810	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
FLUORENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg

Parameter	Result	Det. Limit	Units
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	410	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	76		% Rec
PHENOL-D5	78		% Rec
NITROBENZENE-D5	75		% Rec
2-FLUOROBIPHENYL	79		% Rec
2,4,6-TRIBROMOPHENOL	61		% Rec
TERPHENYL-D14	85		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314366

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.99	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.20	mg/kg
DECACHLOROBIPHENYL (DCB)	124.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3557.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314367
	Complete	PO Number	
	14-JUL-94	5369-50	
	Printed	Sampled	
	18-JUL-94	15-JUN-94 14:45	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-061594-WP-100
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 21-JUN-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	650	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: A. WOOD Analysis Date: 17-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	23	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.1	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-JUL-94 11:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 08-JUL-94 13:00 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	1000	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	4300	22.	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	30.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	130	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	16.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	70.	4.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.2	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.2	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	1400	200	mg/kg
DRY WEIGHT CORRECTED RESULT	6100	870	mg/kg

DILUTION 1:10

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
CHROMIUM	3.0	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	4.3	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	4.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	2.7	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	12.	8.7	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	1300	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	5600	110	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	200	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	870	87.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	36.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	160	4.3	mg/kg

Sample not homogeneous for Mn. Bad RPD for 2 digestions.

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
NICKEL	1.8	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.8	4.3	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Uni
POTASSIUM	140	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	610	87.	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	1.1	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	4.8	4.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	24.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	100	87.	mg/kg

prep blank was 0.35 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	1.8	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.8	4.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ZINC	21.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	91.	8.7	mg/kg

PREP BLANK WAS 0.032 MG/L

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 08-JUL-94 17:40 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ARSENIC	0.91	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	4.0	2.2	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.2	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	4.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	11.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	48.	2.2	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 22-JUN-94 12:50 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 23-JUN-94 09:42 Instrument: CVAA Test: M120.2.0
Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.52	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: R. SHAMP Analysis Date: 29-JUN-94 12:42 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	32	20	ug/kg
DRY WEIGHT CORRECTED RESULT	140	87.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	43.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	43.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
CHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg

Parameter	Result	Det. Limit	Units
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
2-HEXANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	43.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	43.	ug/kg
4-METHYL-2-PENTANONE	19	10	ug/kg
DRY WEIGHT CORRECTED RESULT	83.	43.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	43.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	22.	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	116		% Rec
TOLUENE-D8	114		% Rec
4-BROMOFLUOROBENZENE	76		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 22-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.08		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 30-JUN-94 16:37 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2900	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	7000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1400	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	66		% Rec
PHENOL-D5	70		% Rec
NITROBENZENE-D5	63		% Rec
2-FLUOROBIPHENYL	70		% Rec
2,4,6-TRIBROMOPHENOL	52		% Rec
TERPHENYL-D14	74		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.35	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.70	mg/kg
DECACHLOROBIPHENYL (DCB)	101.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3557.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	2940	A314368
	Complete	PO Number	
	14-JUL-94	5369-50	
	Printed	Sampled	
	18-JUL-94	15-JUN-94 15:30	

Report To	Bill To
DEBBIE GAGE CONESTOGA-ROVERS & ASSOCIATES, INC. O'HARE CORPORATE TOWERS ONE 10400 WEST HIGGINS ROAD, SUITE 103 ROSEMONT, IL 60018	ACCOUNTS PAYABLE CONESTOGA-ROVERS & ASSOC., INC. 10400 W. HIGGINS RD. ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-061594-WP-102
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 21-JUN-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	2100	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: A. WOOD Analysis Date: 17-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	26	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.96	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 20-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

 (continued on next page)

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-JUL-94 11:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 08-JUL-94 13:00 Test: P129.7.2

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	4300	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	16000	19.	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	300	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1200	mg/kg

DILUTION 1:100

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	50.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	190	3.8	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.9	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	2200	200	mg/kg
DRY WEIGHT CORRECTED RESULT	8500	770	mg/kg

DILUTION 1:10

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
CHROMIUM	7.7	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	30.	3.8	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	2.0	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.7	3.8	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	7.4	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	7.7	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	4900	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	19000	96.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	550	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2100	77.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
MANGANESE	43.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	160	3.8	mg/kg

Sample not homogeneous for Mn. Bad RPD for 2 digestions.

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
NICKEL	5.5	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	21.	3.8	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	410	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	1600	77.	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	1.1	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	4.2	3.8	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	43.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	160	77.	mg/kg

prep blank was 0.35 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	7.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	28.	3.8	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 11-JUL-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ZINC	40.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	150	7.7	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 08-JUL-94 17:40 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.2

Parameter	Result	Det. Limit	Units
ARSENIC	2.1	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	8.1	1.9	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.51	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	2.0	1.9	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.8	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	24.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	92.	1.9	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 22-JUN-94 12:50 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 23-JUN-94 09:42 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.46	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: R. SHAMP Analysis Date: 29-JUN-94 13:28 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	29	20	ug/kg
DRY WEIGHT CORRECTED RESULT	110	77.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg

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Parameter	Result	Det. Limit	Units
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
2-HEXANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
METHYL ETHYL KETONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
4-METHYL-2-PENTANONE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	38.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	19.	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	102		% Rec
TOLUENE-D8	107		% Rec
4-BROMOFLUOROBENZENE	86		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 22-JUN-94 Test: P238.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.03		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: J. MINNIEAR, II Analysis Date: 30-JUN-94 13:58 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P238.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg

Parameter	Result	Det. Limit	Units
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2500	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
FLUORENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg

Parameter	Result	Det. Limit	Units
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6200	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1300	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	64		% Rec
PHENOL-D5	69		% Rec
NITROBENZENE-D5	62		% Rec
2-FLUOROBIPHENYL	66		% Rec
2,4,6-TRIBROMOPHENOL	58		% Rec
TERPHENYL-D14	76		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	mg/kg
BETA-BHC	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
DELTA-BHC	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
HEPTACHLOR	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
ALDRIN	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
ENDOSULFAN I	BDL	0.0080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
DIELDRIN	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
4,4'-DDE	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
ENDRIN	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
ENDOSULFAN II	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
4,4'-DDD	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
ENDOSULFAN SULFATE	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
4,4'-DDT	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
METHOXYCHLOR	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
ENDRIN ALDEHYDE	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
ENDRIN KETONE	BDL	0.016	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
ALPHA-CHLORDANE	BDL	0.080	ug/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314368

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
GAMMA-CHLORDANE	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
TOXAPHENE	BDL	0.16	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
PCB AROCHLOR 1016	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
PCB AROCHLOR 1221	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
PCB AROCHLOR 1232	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
PCB AROCHLOR 1242	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
PCB AROCHLOR 1248	BDL	0.080	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.31	ug/kg
PCB AROCHLOR 1254	BDL	0.16	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
PCB AROCHLOR 1260	BDL	0.16	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.62	ug/kg
DECACHLOROBIPHENYL (DCB)	100.4		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3557.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	17-JUN-94	2940	A314585
	Complete	PO Number	
	13-JUL-94	5369-50	
	Printed	Sampled	
	21-JUL-94	15-JUN-94 17:55	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE ID: D-061594-WP-104 MS/MSD
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 21-JUN-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	310	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: E. WALSH Analysis Date: 21-JUN-94 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	84	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 28-JUN-94 07:02 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 29-JUN-94 10:00 Instrument: AUTO-ANALYZER Test: G101.4.0

Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.25	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.30	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 22-JUN-94 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.5		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Unit
ALUMINUM	7900	10.	mg/kg
DRY WEIGHT CORRECTED RESULT	9400	12.	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 06-JUL-94 17:00 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	60.	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	71.	mg/kg

DILUTION 1:10

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	57.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	68.	2.4	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.4	mg/kg

DILUTION 1:2

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	840	40.	mg/kg
DRY WEIGHT CORRECTED RESULT	1000	48.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	11.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	2.4	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	5.1	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	6.1	2.4	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	4.9	4.0	mg/kg
DRY WEIGHT CORRECTED RESULT	5.8	4.8	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 05-JUL-94 20:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	5900	25.	mg/kg
DRY WEIGHT CORRECTED RESULT	7000	30.	mg/kg

DILUTION 1:10

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	1100	40.	mg/kg
DRY WEIGHT CORRECTED RESULT	1300	48.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	650	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	770	2.4	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	9.1	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	2.4	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
POTASSIUM	390	40.	mg/kg
DRY WEIGHT CORRECTED RESULT	460	48.	mg/kg

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.4	mg/kg

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SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 08-JUL-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	59.	40.	mg/kg
DRY WEIGHT CORRECTED RESULT	70.	48.	mg/kg

prep blank was 0.29 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	22.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	2.4	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 03-JUL-94 00:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	40.	4.0	mg/kg
DRY WEIGHT CORRECTED RESULT	48.	4.8	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	4.6	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	5.5	1.2	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	2.4	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. WALLACE Analysis Date: 06-JUL-94 22:00 Instrument: ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	18.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	21.	1.2	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 30-JUN-94 12:15 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: K. BUCKNER Analysis Date: 01-JUL-94 08:37 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.60	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 27-JUN-94 19:24 Instrument: GC/MS VOA Test: 0510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	15	5	ug/kg
DRY WEIGHT CORRECTED RESULT	18.	6.0	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg

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Parameter	Result	Det. Limit	Units
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	84		% Rec
TOLUENE-D8	94		% R
4-BROMOFLUOROBENZENE	98		% Re

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: M. FRANK Analysis Date: 22-JUN-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	29.95		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 05-JUL-94 20:51 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg

Parameter	Result	Det. Limit	Units
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	780	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
SURROGATE RECOVERY			

Parameter	Result	Det. Limit	Units
2-FLUOROPHENOL	80		% Rec
PHENOL-D5	73		% Rec
NITROBENZENE-D5	66		% Rec
2-FLUOROBIPHENYL	74		% Rec
2,4,6-TRIBROMOPHENOL	81		% Rec
TERPHENYL-D14	87		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314585

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.95	mg/kg
PCB AROCHLOR 1254	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
DECACHLOROBIPHENYL (DCB)	99.8		Percent

Sample Comments

BDL Below Detection Limit

Sample chain of custody number 3583.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320969
	Complete	PO Number	
	27-SEP-94	5369-50	
	Printed	Sampled	
	27-SEP-94	30-AUG-94 09:30	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: D-083094-KJJ-107
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 12-SEP-94 10:00 Instrument: TOC Test: O401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: B. HAUK Analysis Date: 02-SEP-94 23:53 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	84	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.14	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-SEP-94 10:00 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-SEP-94 13:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	11000	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13000	6.0	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	6.7	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	8.0	3.6	mg/kg

There was matrix interference for this element.
Bad spike recovery for two digestions.

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	50.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	60.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.66	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.78	0.60	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	1.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	1.5	0.60	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	17000	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	20000	24.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	22.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	1.2	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	8.9	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	10.	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	16.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	19.	2.4	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	21000	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	25000	3.0	mg/kg

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	9300	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	11000	24.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	410	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	490	1.2	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	25.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	30.	1.2	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
POTASSIUM	1900	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2300	24.	mg/kg

Sample not homogeneous for this element.
Bad RPD for two digestions.

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	130	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	150	24.	mg/kg

prep blank was 0.78 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	24.	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	140	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	170	2.4	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	6.6	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.8	0.60	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.60	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	27.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	32.	0.60	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: M. RENICK Analysis Date: 06-SEP-94 09:00 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.060	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: R. SHAMP Analysis Date: 12-SEP-94 07:04 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
ETHYL BENZENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	60.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.0	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	106		% Rec
TOLUENE-D8	102		% Rec
4-BROMOFLUOROBENZENE	97		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 09-SEP-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 14-SEP-94 16:36 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	780	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg

Parameter	Result	Det. Limit	Units
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PHENOL	BDL	330	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	103		% Rec
PHENOL-D5	91		% Rec
NITROBENZENE-D5	86		% Rec
2-FLUOROBIPHENYL	79		% Rec
2,4,6-TRIBROMOPHENOL	72		% Rec
TERPHENYL-D14	87		% Rec

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0095	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320969

Parameter	Result	Det. Limit	Units
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.095	mg/kg
PCB AROCHLOR 1254	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
DECACHLOROBIPHENYL (DCB)	116.8		Percent

Sample Comments

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320970
	Complete	PO Number	
	27-SEP-94	5369-50	
	Printed	Sampled	
	27-SEP-94	30-AUG-94 09:50	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: D-083094-KJJ-108
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 12-SEP-94 10:00 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: B. HAUK Analysis Date: 02-SEP-94 23:53 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	76	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.18	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	0.24	0.16	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-SEP-94 10:00 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

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HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320970

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-SEP-94 13:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	9100	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	12000	6.6	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	3.8	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	5.0	3.9	mg/kg

There was matrix interference for this element.
Bad spike recovery for two digestions.

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	64.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	84.	1.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.53	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.70	0.66	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	0.95	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	1.2	0.66	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	4600	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	6000	26.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	16.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	21.	1.3	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	8.0	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	10.	1.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	14.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	2.6	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	18000	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	24000	3.3	mg/kg

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	3600	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	4700	26.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	280	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	370	1.3	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	18.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	24.	1.3	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
POTASSIUM	1200	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	1600	26.	mg/kg

 (continued on next page)

Sample not homogeneous for this element.
Bad RPD for two digestions.

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	140	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	180	26.	mg/kg

prep blank was 0.78 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	19.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	25.	1.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	100	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	130	2.6	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	5.3	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	7.0	0.66	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.59	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.78	0.66	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	22.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	29.	0.66	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: M. RENICK Analysis Date: 06-SEP-94 09:00 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.066	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 13-SEP-94 12:24 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	66.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
ETHYL BENZENE	BDL	5	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	66.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	8	5	ug/kg
DRY WEIGHT CORRECTED RESULT	10.	6.6	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	66.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	66.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/k
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.6	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	100		% Rec
4-BROMOFLUOROBENZENE	98		% Rec

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 09-SEP-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. WILSON Analysis Date: 15-SEP-94 18:52 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
ACENAPHTHYLENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
ANTHRACENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/k
BENZ(A)ANTHRACENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BENZO(A)PYRENE	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BENZO(B)FLUORANTHENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BENZO(G,H,I)PERYLENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BENZO(K)FLUORANTHENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BENZYLBUTYLPHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
CARBAZOLE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-CHLOROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-CHLORONAPHTHALENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
CHRYSENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
DIBENZOFURAN	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
1,2-DICHLOROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
1,3-DICHLOROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
1,4-DICHLOROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	3300	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	4300	ug/kg
DIETHYLPHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
DIMETHYLPHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
DI-N-BUTYLPHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DINITROTOLUENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,6-DINITROTOLUENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
DI-N-OCTYLPHTHALATE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
FLUORANTHENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
FLUORENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg

Parameter	Result	Det. Limit	Units
HEXACHLOROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
HEXACHLOROBUTADIENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
HEXACHLOROETHANE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
ISOPHORONE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-METHYLNAPHTHALENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
NAPHTHALENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-NITROANILINE	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
3-NITROANILINE	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
4-NITROANILINE	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
NITROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PHENANTHRENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PYRENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-CHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DIMETHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
2,4-DINITROPHENOL	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-NITROPHENOL	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
PENTACHLOROPHENOL	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
PHENOL	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	8000	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	10000	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
SURROGATE RECOVERY			
2-FLUOROPHENOL	51		% Rec
PHENOL-D5	36		% Rec
NITROBENZENE-D5	44		% Rec
2-FLUOROBIPHENYL	68		% Rec
2,4,6-TRIBROMOPHENOL	43		% Rec
TERPHENYL-D14	63		% Rec

1:5 dilution
Unable to analyze sample at lower dilution due to high concentration of non-target compounds.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320970

Parameter	Result	Det. Limit	Units
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1254	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DECACHLOROBIPHENYL (DCB)	100.4		Percent

Sample Comments

BDL Below Detection Limit

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Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320971
	Complete	PO Number	
	27-SEP-94	5369-50	
	Printed	Sampled	
	27-SEP-94	30-AUG-94 10:25	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: D-083094-KJJ-109
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 12-SEP-94 10:00 Instrument: TOC Test: G401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: B. HAUK Analysis Date: 02-SEP-94 23:53 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	77	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	0.18	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	0.23	0.16	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-SEP-94 10:00 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

 (continued on next page)

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-SEP-94 13:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	9200	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	12000	6.5	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	3.2	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	4.2	3.9	mg/kg

There was matrix interference for this element.
Bad spike recovery for two digestions.

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	56.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	73.	1.3	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	0.55	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.71	0.65	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	0.67	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.87	0.65	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	1900	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2500	26.	mg/kg

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CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	13.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	1.3	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	5.8	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	7.5	1.3	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	9.9	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	13.	2.6	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	14000	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	18000	3.2	mg/kg

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	1900	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	2500	26.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	140	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	180	1.3	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	13.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	17.	1.3	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
POTASSIUM	860	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	1100	26.	mg/kg

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Sample not homogeneous for this element.
Bad RPD for two digestions.

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	110	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	140	26.	mg/kg

prep blank was 0.78 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	20.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	1.3	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	47.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	61.	2.6	mg/kg

ARSENIC TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	4.1	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	5.3	0.65	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.54	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.70	0.65	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.3	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	14.	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	18.	0.65	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: M. RENICK Analysis Date: 06-SEP-94 09:00 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.065	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 13-SEP-94 13:09 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	65.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
ETHYL BENZENE	BDL	5	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	65.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	6	5	ug/kg
DRY WEIGHT CORRECTED RESULT	7.8	6.5	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	65.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	65.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
VINYL CHLORIDE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	13.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	6.5	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	99		% Rec
TOLUENE-D8	100		% Rec
4-BROMOFLUOROBENZENE	93		% Rec

Sample reanalyzed with no improvement in internal standard areas.

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 09-SEP-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 14-SEP-94 14:54 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZ(A)ANTHRACENE	BDL	330	ug/kg

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Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	860	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg

Parameter	Result	Det. Limit	Units
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
INDENO(1,2,3-CD)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2-NITROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PENTACHLOROPHENOL	BDL	1600	ug/kg

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	2100	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	430	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	105		ug/kg
PHENOL-D5	91		ug/kg
NITROBENZENE-D5	83		ug/kg
2-FLUOROBIPHENYL	85		ug/kg
2,4,6-TRIBROMOPHENOL	71		ug/kg
TERPHENYL-D14	84		ug/kg

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.010	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.021	mg/kg

Parameter	Result	Det. Limit	Units
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
GAMMA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.10	mg/kg
PCB AROCHLOR 1254	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.21	mg/kg
DECACHLOROBIPHENYL (DCB)	124.4		Percent

Sample Comments

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	2940	A320972
	Complete	PO Number	
	27-SEP-94	5369-50	
	Printed	Sampled	
	27-SEP-94	30-AUG-94 16:00	

Report To

DEBBIE GAGE
CONESTOGA-ROVERS & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD, SUITE 103
ROSEMONT, IL 60018

Bill To

ACCOUNTS PAYABLE
CONESTOGA-ROVERS & ASSOC., INC.
10400 W. HIGGINS RD.
ROSEMONT, IL 60018

Sample Description

SAMPLE I.D.: D-083094-KJJ-113
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst: S. PFEFFER Analysis Date: 12-SEP-94 10:00 Instrument: TOC Test: 0401.0.0

Parameter	Result	Det. Limit	Units
TOTAL ORGANIC CARBON (TOC)	BDL	300	mg/kg

Note: Result reflects the water soluble part of the sample.

TOTAL SOLIDS EPA 160.3

Analyst: B. HAUK Analysis Date: 02-SEP-94 23:53 Test: G401.7.0

Parameter	Result	Det. Limit	Units
SOLIDS	85	0.001	Percent

CYANIDE DISTILLATION SW846-9010A

Analyst: C. WILSON Analysis Date: 06-SEP-94 08:25 Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		Grams
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst: J. STOAKES Analysis Date: 06-SEP-94 14:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010A P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.12	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.14	mg/kg

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 06-SEP-94 10:00 Test: P129.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

Analyst: S. BISHOP Analysis Date: 09-SEP-94 13:00 Test: P129.7.1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1		Grams
FINAL WEIGHT OR VOLUME	100		mL

ALUMINUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M101.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ALUMINUM	3000	5.0	mg/kg
DRY WEIGHT CORRECTED RESULT	3500	5.9	mg/kg

ANTIMONY ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M102.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	3.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	3.5	mg/kg

There was matrix interference for this element.
Bad spike recovery for two digestions.

BARIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M104.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BARIUM	37.	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	44.	1.2	mg/kg

BERYLLIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M105.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.59	mg/kg

CADMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M108.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.59	mg/kg

CALCIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M109.3.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CALCIUM	760	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	890	24.	mg/kg

CHROMIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
CHROMIUM	4.3	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	5.0	1.2	mg/kg

COBALT ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COBALT	2.5	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	2.9	1.2	mg/kg

COPPER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
COPPER	2.0	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	2.4	2.4	mg/kg

IRON ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
IRON	5000	2.5	mg/kg
DRY WEIGHT CORRECTED RESULT	5900	2.9	mg/kg

MAGNESIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	500	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	590	24.	mg/kg

MANGANESE ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
MANGANESE	340	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	400	1.2	mg/kg

NICKEL ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
NICKEL	4.0	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	4.7	1.2	mg/kg

POTASSIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 09-SEP-94 19:00 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.1

Parameter	Result	Det. Limit	Units
POTASSIUM	320	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	380	24.	mg/kg

 (continued on next page)

Sample not homogeneous for this element.
Bad RPD for two digestions.

SILVER ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

SODIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SODIUM	89.	20.	mg/kg
DRY WEIGHT CORRECTED RESULT	100	24.	mg/kg

prep blank was 0.78 mg/l

VANADIUM ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
VANADIUM	6.9	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	8.1	1.2	mg/kg

ZINC ICP SW846-6010A

Analyst: A. HILSCHER Analysis Date: 07-SEP-94 18:00 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ZINC	22.	2.0	mg/kg
DRY WEIGHT CORRECTED RESULT	26.	2.4	mg/kg

prep blank was 0.030 mg/l

ARSENIC TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
ARSENIC	1.7	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	2.0	0.59	mg/kg

SELENIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
SELENIUM	0.61	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	0.72	0.59	mg/kg

THALLIUM TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	1.0	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	1.2	mg/kg

LEAD TRACE ICP SW846-6010A

Analyst: J. KRAMER Analysis Date: 16-SEP-94 12:34 Instrument: ICP Test: M116.0.0

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A P129.7.0

Parameter	Result	Det. Limit	Units
LEAD	9.7	0.50	mg/kg
DRY WEIGHT CORRECTED RESULT	11.	0.59	mg/kg

MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

Analyst: M. RENICK Analysis Date: 06-SEP-94 09:00 Test: P131.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	0.4		Grams
FINAL VOLUME	100		mL

MERCURY CVAA SW846-7471(MOD)

Analyst: R. BYERS Analysis Date: 08-SEP-94 09:25 Instrument: CVAA Test: M120.2.0

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD) P131.7.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.050	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.059	mg/kg

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst: B. MAZUR Analysis Date: 13-SEP-94 13:55 Instrument: GC/MS VOA Test: O510.9.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	59.	ug/kg
BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
BROMODICHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
BROMOFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
BROMOMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CARBON DISULFIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
CARBON TETRACHLORIDE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
CHLOROBENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
CHLOROETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CHLOROFORM	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
CHLOROMETHANE	BDL	10	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
DIBROMOCHLOROMETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,1-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,2-DICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,1-DICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,2-DICHLOROPROPANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
ETHYL BENZENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
2-HEXANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	59.	ug/kg
DICHLOROMETHANE (METHYLENE CHLORIDE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
METHYL ETHYL KETONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	59.	ug/kg
4-METHYL-2-PENTANONE	BDL	50	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	59.	ug/kg
STYRENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
TETRACHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
TOLUENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,2-DICHLOROETHENE (CIS AND TRANS)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,1,1-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
1,1,2-TRICHLOROETHANE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
TRICHLOROETHENE	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
VINYL CHLORIDE	BDL	10	ug/
DRY WEIGHT CORRECTED RESULT	BDL	12.	ug/kg
XYLENES (O/M/P-XYLENE)	BDL	5	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	5.9	ug/kg
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	93		% Rec
TOLUENE-D8	106		% Rec
4-BROMOFLUOROBENZENE	97		% Rec

Sample reanalyzed with no improvement in internal standard areas.

GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Analyst: C. KING Analysis Date: 09-SEP-94 Test: P236.0.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	30.0		Grams
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst: G. HUGHS Analysis Date: 14-SEP-94 15:45 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ACENAPHTHYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg

Parameter	Result	Det. Limit	Units
BENZ(A)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(A)PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(B)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(G,H,I)PERYLENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZO(K)FLUORANTHENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BENZYLBUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHOXY)METHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROETHYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-CHLOROISOPROPYL)ETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-BROMOPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CARBAZOLE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROANILINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLORONAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLOROPHENYLPHENYLETHER	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
CHRYSENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZ(A,H)ANTHRACENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIBENZOFURAN	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,3-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,4-DICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
3,3'-DICHLOROBENZIDINE	BDL	660	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	780	ug/kg
DIETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DIMETHYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-BUTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,6-DINITROTOLUENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
DI-N-OCTYLPHTHALATE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORANTHENE	BDL	330	ug/kg

 (continued on next page)

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
FLUORENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROBENZENE	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROBUTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROCYCLOPENTADIENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
HEXACHLOROETHANE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
INDENO[1,2,3-CD]PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
ISOPHORONE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-METHYLNAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
NAPHTHALENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
3-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
4-NITROANILINE	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
NITROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
N-NITROSO-DIPHENYLAMINE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/
N-NITROSO-DI-N-PROPYLAMINE	BDL	330	ug/
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PHENANTHRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
PYRENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
1,2,4-TRICHLOROBENZENE	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-CHLORO-3-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-CHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4-DIMETHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4,6-DINITRO-2-METHYLPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2,4-DINITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
2-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
4-METHYLPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2-NITROPHENOL	BDL	330	ug/k
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/l
4-NITROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg

Parameter	Result	Det. Limit	Units
PENTACHLOROPHENOL	BDL	1600	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	1900	ug/kg
PHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4,5-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
2,4,6-TRICHLOROPHENOL	BDL	330	ug/kg
DRY WEIGHT CORRECTED RESULT	BDL	390	ug/kg
.			
SURROGATE RECOVERY			

2-FLUOROPHENOL	97		ug/kg
PHENOL-D5	87		ug/kg
NITROBENZENE-D5	83		ug/kg
2-FLUOROBIPHENYL	82		ug/kg
2,4,6-TRIBROMOPHENOL	81		ug/kg
TERPHENYL-D14	83		ug/kg

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550 P236.0.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
BETA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
DELTA-BHC	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
GAMMA-BHC (LINDANE)	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
HEPTACHLOR	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
ALDRIN	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
HEPTACHLOR EPOXIDE	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
ENDOSULFAN I	BDL	0.0080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.0094	mg/kg
DIELDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDRIN	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDOSULFAN II	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDD	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDOSULFAN SULFATE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
4,4'-DDT	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
METHOXYCHLOR	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
ENDRIN ALDEHYDE	BDL	0.016	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ENDRIN KETONE	BDL	0.016	mg/kg

 (continued on next page)

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320972

Parameter	Result	Det. Limit	Units
DRY WEIGHT CORRECTED RESULT	BDL	0.019	mg/kg
ALPHA-CHLORDANE	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/k
GAMMA-CHLORDANE	BDL	0.080	mg/k
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
TOXAPHENE	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1016	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
PCB AROCHLOR 1221	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
PCB AROCHLOR 1232	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
PCB AROCHLOR 1242	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
PCB AROCHLOR 1248	BDL	0.080	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.094	mg/kg
PCB AROCHLOR 1254	BDL	0.160	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
PCB AROCHLOR 1260	BDL	0.16	mg/kg
DRY WEIGHT CORRECTED RESULT	BDL	0.19	mg/kg
DECACHLOROBIPHENYL (DCB)	133.8		Percent

Sample Comments

BDL Below Detection Limit

This Certificate shall not be reproduced, except in full, without the written approval of the lab.

Quality Assurance Officer: _____

SURFACE WATER

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313419
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	01-JUL-94	5369-50
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 10:30

Sample Description

SAMPLE ID: SW-060494-WP-002
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : C. BOYLE — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
SPI02	Q941046	A313422	CYANIDE	0	.1	.086	mg/L	86	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941016		CYANIDE	.1		.096	mg/L	96	
BLA01	Q941037		CYANIDE			-.0003	mg/L		
BLA02	Q940937		CYANIDE			.005	mg/L		
LFB02	Q940962		CYANIDE	.3		.247	mg/L	82.3	
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q941044		CYANIDE	.1		.095	mg/L	95	
BLA01	Q941045		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 10-JUN-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 13-JUN-94 — File ID: — Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	ALUMINUM	2.00		2.03	mg/L	102	
ICV01	Q940579	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP02	Q935524	A313423	ALUMINUM	.536		.492	mg/L		9
SPI02	Q935522	A313423	ALUMINUM	.536	2	2.44	mg/L	95	
CDL01	Q940565	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q940564	PERKIN ELM	ALUMINUM	500		516.	mg/L	103	
CCV	Q940622	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935520	SPEX	ALUMINUM	20.0		18.3	mg/L	92	
BLA02	Q935521	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940617	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q940558	PERKIN ELM	ALUMINUM	500		502.	mg/L	100	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	ANTIMONY	0.400		0.394	mg/L	99
DUP02	Q935524	A313423	ANTIMONY	0		BDL	mg/L	
SPI02	Q935522	A313423	ANTIMONY	0	0.500	0.465	mg/L	93
CDL01	Q940566	PERKIN ELM	ANTIMONY	0.120		0.130	mg/L	108
CCV	Q940622	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940621	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q935520	SPEX	ANTIMONY	5.00		4.45	mg/L	89
BLA02	Q935521	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A313419		See Certificate of Analysis					
CCV	Q940618	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940617	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q940556	PERKIN ELM	ANTIMONY	0.120		0.133	mg/L	111

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	BARIUM	2.00		2.09	mg/L	105	
ICV01	Q940579	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q935524	A313423	BARIUM	.0192		.0192	mg/L		0
SPI02	Q935522	A313423	BARIUM	.0192	2	1.97	mg/L	98	
CDL01	Q940565	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q940564	PERKIN ELM	BARIUM	0.500		0.519	mg/L	104	
CCV	Q940622	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940621	NA	BARIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	Q935521	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q940558	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	BERYLLIUM	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	BERYLLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	BERYLLIUM	0	0.050	0.0517	mg/L	103	
CDL01	Q940565	INORGANIC	BERYLLIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	BERYLLIUM	5.00		5.16	mg/L	103	
BLA01	Q940621	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935520	SPEX	BERYLLIUM	0.500		0.476	mg/L	95	
BLA02	Q935521	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	Q940617	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	BERYLLIUM	0.010		0.0109	mg/L	109	
ICS-A	Q940558	PERKIN ELM	BERYLLIUM	0.500		0.492	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CADMIUM	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	CADMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CADMIUM	0	0.050	0.0428	mg/L	86	
CDL01	Q940565	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CADMIUM	1.00		0.922	mg/L	92	
CCV	Q940622	INORGANIC	CADMIUM	5.00		5.10	mg/L	102	
BLA01	Q940621	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935525	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q935526	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	Q940617	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	CADMIUM	0.010		0.0123	mg/L	123	
ICS-A	Q940558	PERKIN ELM	CADMIUM	1.00		0.890	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	CALCIUM	100		98.2	mg/L	98	
DUP02	Q935524	A313423	CALCIUM	28.9		29.2	mg/L		1
SPI02	Q935522	A313423	CALCIUM	28.9	100	121	mg/L	92	
ICS-A	Q940564	PERKIN ELM	CALCIUM	500		476.	mg/L	95	
CCV	Q940622	INORGANIC	CALCIUM	50.0		50.9	mg/L	102	
BLA01	Q940621	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	CALCIUM	100		91.3	mg/L	91	
BLA02	Q935521	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q940617	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CHROMIUM	0.400		0.421	mg/L	105	
DUP02	Q935524	A313423	CHROMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q940565	INORGANIC	CHROMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	Q940622	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	Q940621	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	CHROMIUM	2.00		1.89	mg/L	95	
BLA02	Q935521	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	Q940617	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	CHROMIUM	0.020		0.0261	mg/L	131	
ICS-A	Q940558	PERKIN ELM	CHROMIUM	0.500		0.478	mg/L	96	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	COBALT	0.400		0.419	mg/L	105
DUP02	Q935524	A313423	COBALT	0		BDL	mg/L	
SPI02	Q935522	A313423	COBALT	0	0.500	0.480	mg/L	96
CDL01	Q940565	INORGANIC	COBALT	10		9.97	mg/L	100
ICS-A	Q940564	PERKIN ELM	COBALT	0.500		0.474	mg/L	95
CCV	Q940622	INORGANIC	COBALT	5.00		5.05	mg/L	101
BLA01	Q940621	NA	COBALT			< 0.004	mg/L	
LCS	Q935520	SPEX	COBALT	5.00		4.59	mg/L	92
BLA02	Q935521	NA	COBALT			< 0.004	mg/L	
SAMPLE	A313419		See Certificate of Analysis					
CCV	Q940618	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	Q940617	NA	COBALT			< 0.004	mg/L	
CDL01	Q940556	PERKIN ELM	COBALT	0.100		0.114	mg/L	114
ICS-A	Q940558	PERKIN ELM	COBALT	0.500		0.460	mg/L	92

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	COPPER	0		BDL	mg/L		
SPI02	Q935522	A313423	COPPER	0	0.250	0.245	mg/L	98	
CDL01	Q944473	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q944472	PERKIN ELM	COPPER	0.500		0.513	mg/L	103	
CCV	Q944451	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944450	NA	COPPER			< 0.008	mg/L		
LCS	Q935520	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q935521	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q944441	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944440	NA	COPPER			< 0.008	mg/L		

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	IRON	1.1		1.04	mg/L		6
SPI02	Q935522	A313423	IRON	1.1	1	1.95	mg/L	85	
CDL01	Q940565	INORGANIC	IRON	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	IRON	200		189.	mg/L	95	
CCV	Q940622	INORGANIC	IRON	5.00		5.44	mg/L	109	
BLA01	Q940621	NA	IRON			< 0.01	mg/L		
LCS	Q935520	SPEX	IRON	10.0		9.67	mg/L	97	
BLA02	Q935521	NA	IRON			< 0.01	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	IRON	5.00		5.47	mg/L	109	
BLA01	Q940617	NA	IRON			< 0.01	mg/L		
ICS-A	Q940558	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	MAGNESIUM	100		99.8	mg/L	100	
DUP02	Q935524	A313423	MAGNESIUM	14.9		15.1	mg/L		1
SPI02	Q935522	A313423	MAGNESIUM	14.9	100	108	mg/L	93	
ICS-A	Q940564	PERKIN ELM	MAGNESIUM	500		492.	mg/L	98	
CCV	Q940622	INORGANIC	MAGNESIUM	50.0		50.2	mg/L	100	
BLA01	Q940621	NA	MAGNESIUM			.256	mg/L		
LCS	Q935520	SPEX	MAGNESIUM	100		90.7	mg/L	91	
BLA02	Q935521	NA	MAGNESIUM			.224	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q940617	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	MAGNESIUM	500		494.	mg/L	99	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	MANGANESE	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	MANGANESE	.0566		.0566	mg/L		0
SPI02	Q935522	A313423	MANGANESE	.0566	.5	.535	mg/L	96	
CDL01	Q940565	INORGANIC	MANGANESE	10		9.99	mg/L	100	
ICS-A	Q940564	PERKIN ELM	MANGANESE	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	MANGANESE	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935520	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	MANGANESE	0.030		0.0369	mg/L	123	
ICS-A	Q940558	PERKIN ELM	MANGANESE	0.500		0.492	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	NICKEL	0.400		0.410	mg/L	103	
DUP02	Q935524	A313423	NICKEL	.0156		BDL	mg/L		44
SPI02	Q935522	A313423	NICKEL	.0156	.5	.466	mg/L	90	
CDL01	Q944473	INORGANIC	NICKEL	10		10.1	mg/L	101	
ICS-A	Q944472	PERKIN ELM	NICKEL	1.00		0.871	mg/L	87	
CCV	Q944451	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944450	NA	NICKEL			< 0.004	mg/L		
LCS	Q935520	SPEX	NICKEL	5.00		4.46	mg/L	89	
BLA02	Q935521	NA	NICKEL			.01	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q944441	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944440	NA	NICKEL			< 0.004	mg/L		
CDL01	Q944417	PERKIN ELM	NICKEL	0.080		0.114	mg/L	143	
ICS-A	Q944416	PERKIN ELM	NICKEL	1.00		0.943	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q940674	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	Q940568	SPEX	POTASSIUM	100		103.	mg/L	103	
ICV01	Q940579	PERKIN ELM	POTASSIUM	20.0		19.2	mg/L	96	
DUP02	Q935524	A313423	POTASSIUM	2.05		1.93	mg/L		6
SPI02	Q935522	A313423	POTASSIUM	2.05	100	95.3	mg/L	93	
CCV	Q940622	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940621	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	POTASSIUM	100		90.1	mg/L	90	
BLA02	Q935521	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940617	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	SILVER	2.00		2.04	mg/L	102	
DUP02	Q942774	A313423	SILVER	0		BDL	mg/L		
SPI02	Q942772	A313423	SILVER	0	0.050	0.0501	mg/L	100	
CDL01	Q944741	INORGANIC	SILVER	2		2.03	mg/L	102	
ICS-A	Q944740	PERKIN ELM	SILVER	1.00		0.992	mg/L	99	
CCV	Q944737	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	Q944736	NA	SILVER			< 0.004	mg/L		
LCS	Q942770	SPEX	SILVER	0.500		0.466	mg/L	93	
BLA02	Q942771	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q944723	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q944720	NA	SILVER			< 0.004	mg/L		
CDL01	Q944756	PERKIN ELM	SILVER	0.020		0.0254	mg/L	127	
ICS-A	Q944755	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	SODIUM	2		2.04	mg/L	102	
ICV01	Q940568	SPEX	SODIUM	100		102.	mg/L	102	
ICV01	Q940579	PERKIN ELM	SODIUM	2		1.88	mg/L	94	
DUP02	Q935524	A313423	SODIUM	4.47		4.56	mg/L		2
SPI02	Q935522	A313423	SODIUM	4.47	100	97.5	mg/L	93	
CCV	Q940622	INORGANIC	SODIUM	50.0		49.2	mg/L	98	
BLA01	Q940621	NA	SODIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	SODIUM	100		90.9	mg/L	91	
BLA02	Q935521	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	SODIUM	50.0		49.0	mg/L	98	
BLA01	Q940617	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	VANADIUM	0.400		0.409	mg/L	102	
DUP02	Q935524	A313423	VANADIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	VANADIUM	0	0.500	0.483	mg/L	97	
CDL01	Q940565	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q940564	PERKIN ELM	VANADIUM	0.500		0.483	mg/L	97	
CCV	Q940622	INORGANIC	VANADIUM	5.00		5.05	mg/L	101	
BLA01	Q940621	NA	VANADIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	VANADIUM	5.00		4.60	mg/L	92	
BLA02	Q935521	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	VANADIUM	5.00		5.03	mg/L	101	
BLA01	Q940617	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	VANADIUM	0.100		0.110	mg/L	110	
ICS-A	Q940558	PERKIN ELM	VANADIUM	0.500		0.476	mg/L	95	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	ZINC	0.400		0.409	mg/L	102	
DUP02	Q935524	A313423	ZINC	0		BDL	mg/L		
SPI02	Q935522	A313423	ZINC	0	0.500	0.498	mg/L	100	
CDL01	Q940565	INORGANIC	ZINC	10		9.93	mg/L	99	
ICS-A	Q940564	PERKIN ELM	ZINC	1.00		1.03	mg/L	103	
CCV	Q940622	INORGANIC	ZINC	5.00		5.11	mg/L	102	
BLA01	Q940621	NA	ZINC			< 0.008	mg/L		
LCS	Q935520	SPEX	ZINC	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	ZINC			.0231	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q940618	INORGANIC	ZINC	5.00		5.08	mg/L	102	
BLA01	Q940617	NA	ZINC			< 0.008	mg/L		
ICS-A	Q940558	PERKIN ELM	ZINC	1.00		1.00	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	ARSENIC	.04		0.0398	mg/L	100	
DUP02	Q935524	A313423	ARSENIC	0		BDL	mg/L		
SPI02	Q935522	A313423	ARSENIC	0	2	2.05	mg/L	103	
CDL01	Q947033	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	Q947032	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947031	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935525	INORGANIC	ARSENIC	.5		0.483	mg/L	97	
BLA02	Q935526	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q947028	INORGANIC	ARSENIC	.1		0.105	mg/L	105	
BLA01	Q947027	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947025	PERKIN-ELM	ARSENIC	.02		0.0225	mg/L	113	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q947037	PERKIN-ELM	LEAD	.04		0.0406	mg/L	102
DUP02	Q935524	A313423	LEAD	0		BDL	mg/L	
SPI02	Q935522	A313423	LEAD	0	0.500	0.477	mg/L	95
ICS-A	Q947040	PERKIN ELM	LEAD	1		0.954	mg/L	95
CDL01	Q947033	INORGANIC	LEAD	.5		0.501	mg/L	100
CCV	Q947032	INORGANIC	LEAD	.1		0.102	mg/L	102
BLA01	Q947031	NA	LEAD			< 0.002	mg/L	
LCS	Q935525	INORGANIC	LEAD	.5		0.492	mg/L	98
BLA02	Q935526	NA	LEAD			< 0.002	mg/L	
SAMPLE	A313419		See Certificate of Analysis					
CCV	Q947028	INORGANIC	LEAD	.1		0.103	mg/L	103
BLA01	Q947027	NA	LEAD			< 0.002	mg/L	
CDL01	Q947025	PERKIN-ELM	LEAD	.006		0.00571	mg/L	95
ICS-A	Q947024	PERKIN ELM	LEAD	1		0.959	mg/L	96

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	SELENIUM	.04		0.0402	mg/L	101	
DUP02	Q935524	A313423	SELENIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	SELENIUM	0	2	2.02	mg/L	101	
CDL01	Q947033	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q947032	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947031	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935525	INORGANIC	SELENIUM	.5		0.478	mg/L	96	
BLA02	Q935526	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q947028	INORGANIC	SELENIUM	.1		0.105	mg/L	105	
BLA01	Q947027	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947025	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	THALLIUM	.04		0.0399	mg/L	100	
DUP02	Q935524	A313423	THALLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	THALLIUM	0	3.00	2.57	mg/L	86	
CDL01	Q947033	INORGANIC	THALLIUM	.5		0.502	mg/L	100	
CCV	Q947032	INORGANIC	THALLIUM	.1		0.101	mg/L	101	
BLA01	Q947031	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935525	INORGANIC	THALLIUM	.5		0.487	mg/L	97	
BLA02	Q935526	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
CCV	Q947028	INORGANIC	THALLIUM	.1		0.0987	mg/L	99	
BLA01	Q947027	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947025	PERKIN-ELM	THALLIUM	.02		.0253	mg/L	127	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 14-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: S. O'NEAL Review Date: 16-JUN-94 File ID: 000695 Run: R220343

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943995		MERCURY	.00147		.00156	mg/L	106.1	
DUP02	Q939762	A313419	MERCURY	0		BDL	mg/L		
SPI02	Q939760	A313419	MERCURY	0	.001	.000936	mg/L	93.6	
CDL01	Q943999		MERCURY	.0002		.000214	mg/L	107	
CCV	Q944022		MERCURY	.003		.0026	mg/L	86.7	
BLA01	Q944023		MERCURY			< .00008	mg/L		
LCS	Q939758		MERCURY	.003		.00272	mg/L	90.7	
BLA02	Q939759		MERCURY			< .00008	mg/L		
SAMPLE	A313419		See Certificate of Analysis						
BLA01	Q944024		MERCURY			< .00008	mg/L		
CCV	Q944025		MERCURY	.003		.00282	mg/L	94	
CDL01	Q944026		MERCURY	.0002		.000183	mg/L	91.5	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >6147J Run: R220046

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q946126	A313421	BENZENE	0	10	9.74	ug/L	97.4	
SPI01	Q946126	A313421	CARBON TETRACHLORIDE	0	10	8.77	ug/L	87.7	
SPI01	Q946126	A313421	1,2-DICHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	Q946126	A313421	1,1-DICHLOROETHENE	0	10	9.64	ug/L	96.4	
SPI01	Q946126	A313421	1,1,1-TRICHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	Q946126	A313421	TRICHLOROETHENE	0	10	10.2	ug/L	102	
SPI01	Q946126	A313421	VINYL CHLORIDE	0	10	9.35	ug/L	93.5	
SPI01	Q946126	A313421	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	BROMOFORM	0	10	9.51	ug/L	95.1	
SPI01	Q946126	A313421	BROMOMETHANE	0	10	9.66	ug/L	96.6	
SPI01	Q946126	A313421	CHLOROBENZENE	0	10	9.64	ug/L	96.4	
SPI01	Q946126	A313421	DIBROMOCHLOROMETHANE	0	10	9.44	ug/L	94.4	
SPI01	Q946126	A313421	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	Q946126	A313421	CHLOROFORM	0	10	10.7	ug/L	107	
SPI01	Q946126	A313421	CHLOROMETHANE	0	10	9.43	ug/L	94.3	
SPI01	Q946126	A313421	TRANS-1,2-DICHLOROETHENE	0	10	9.68	ug/L	96.8	
SPI01	Q946126	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	Q946126	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.3	ug/L	103	
SPI01	Q946126	A313421	1,1-DICHLOROETHANE	0	10	10.2	ug/L	102	
SPI01	Q946126	A313421	1,2-DICHLOROPROPANE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	11	ug/L	110	
SPI01	Q946126	A313421	ETHYL BENZENE	0	10	9.24	ug/L	92.4	
SPI01	Q946126	A313421	STYRENE	0	10	9.43	ug/L	94.3	
SPI01	Q946126	A313421	1,1,2-TRICHLOROETHANE	0	10	11.3	ug/L	113	
SPI01	Q946126	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	Q946126	A313421	TETRACHLOROETHENE	0	10	9.05	ug/L	90.5	
SPI01	Q946126	A313421	TOLUENE	0	10	10.5	ug/L	105	
SPI01	Q946126	A313421	ACETONE	7.5	10	19.9	ug/L	124	
SPI01	Q946126	A313421	CARBON DISULFIDE	0	10	9.25	ug/L	92.5	
SPI01	Q946126	A313421	4-METHYL-2-PENTANONE	0	10	8.98	ug/L	89.8	
SPI01	Q946126	A313421	2-HEXANONE	0	10	10.9	ug/L	109	
DPS01	Q946127	A313421	BENZENE	0	10	9.93	ug/L	99.3	1.9
DPS01	Q946127	A313421	CARBON TETRACHLORIDE	0	10	9.36	ug/L	93.6	6.5
DPS01	Q946127	A313421	1,2-DICHLOROETHANE	0	10	10.1	ug/L	101	6.7
DPS01	Q946127	A313421	1,1-DICHLOROETHENE	0	10	10.5	ug/L	105	8.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q946127	A313421	1,1,1-TRICHLOROETHANE	0	10	10.1	ug/L	101	3.1
DPS01	Q946127	A313421	TRICHLOROETHENE	0	10	10.9	ug/L	109	6.6
DPS01	Q946127	A313421	VINYL CHLORIDE	0	10	10.2	ug/L	102	7
DPS01	Q946127	A313421	BROMODICHLOROMETHANE	0	10	10.3	ug/L	103	9
DPS01	Q946127	A313421	BROMOFORM	0	10	9.42	ug/L	94.2	1
DPS01	Q946127	A313421	BROMOMETHANE	0	10	10.1	ug/L	101	4.5
DPS01	Q946127	A313421	CHLOROBENZENE	0	10	10.1	ug/L	101	4.7
DPS01	Q946127	A313421	DIBROMOCHLOROMETHANE	0	10	9.3	ug/L	93	1.5
DPS01	Q946127	A313421	CHLOROETHANE	0	10	10.5	ug/L	105	7
DPS01	Q946127	A313421	CHLOROFORM	0	10	10.4	ug/L	104	2.8
DPS01	Q946127	A313421	CHLOROMETHANE	0	10	10.1	ug/L	101	6.9
DPS01	Q946127	A313421	TRANS-1,2-DICHLOROETHENE	0	10	10.4	ug/L	104	7.2
DPS01	Q946127	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	0
DPS01	Q946127	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.2	ug/L	102	1
DPS01	Q946127	A313421	1,1-DICHLOROETHANE	0	10	10.4	ug/L	104	1.9
DPS01	Q946127	A313421	1,2-DICHLOROPROPANE	0	10	10.5	ug/L	105	.9
DPS01	Q946127	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.3	ug/L	103	2.9
DPS01	Q946127	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	5.6
DPS01	Q946127	A313421	ETHYL BENZENE	0	10	9.99	ug/L	99.9	7.8
DPS01	Q946127	A313421	STYRENE	0	10	9.65	ug/L	96.5	2.3
DPS01	Q946127	A313421	1,1,2-TRICHLOROETHANE	0	10	10.5	ug/L	105	7.3
DPS01	Q946127	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	0
DPS01	Q946127	A313421	TETRACHLOROETHENE	0	10	10	ug/L	100	10
DPS01	Q946127	A313421	TOLUENE	0	10	10.7	ug/L	107	1.9
DPS01	Q946127	A313421	ACETONE	7.5	10	16.3	ug/L	88	34
DPS01	Q946127	A313421	CARBON DISULFIDE	0	10	9.74	ug/L	97.4	5.2
DPS01	Q946127	A313421	4-METHYL-2-PENTANONE	0	10	8.28	ug/L	82.8	8.1
DPS01	Q946127	A313421	2-HEXANONE	0	10	10.5	ug/L	105	7.7
CCV	Q941730		See Attached Report g6141j.ind						
BLA01	Q941731		See Attached Report g6142j.ind						
SAMPLE	A313419		See Certificate of Analysis						

Comments

Q946126 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q946127 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 14-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 16-JUN-94 File ID: >7692H Run: R220504

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q938223	A313337	PHENOL	0	200	73.5	ug/L	36.8	9.6
DPS02	Q938223	A313337	2-CHLOROPHENOL	0	200	154	ug/L	77	1.9
DPS02	Q938223	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	146	ug/L	73	2
DPS02	Q938223	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	163	ug/L	81.5	1.8
DPS02	Q938223	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	0
DPS02	Q938223	A313337	4-CHLORO-3-METHYLPHENOL	0	200	157	ug/L	78.5	5.6
DPS02	Q938223	A313337	ACENAPHTHENE	0	200	159	ug/L	79.5	3.1
DPS02	Q938223	A313337	4-NITROPHENOL	0	200	70.7	ug/L	35.4	15.
DPS02	Q938223	A313337	2,4-DINITROTOLUENE	0	200	171	ug/L	85.5	4.6
DPS02	Q938223	A313337	PENTACHLOROPHENOL	0	200	175	ug/L	87.5	3.4
DPS02	Q938223	A313337	PYRENE	0	200	181	ug/L	90.5	1.1
SPI02	Q938222	A313337	PHENOL	0	200	81	ug/L	40.5	
SPI02	Q938222	A313337	2-CHLOROPHENOL	0	200	157	ug/L	78.5	
SPI02	Q938222	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	149	ug/L	74.5	
SPI02	Q938222	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	166	ug/L	83	
SPI02	Q938222	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	
SPI02	Q938222	A313337	4-CHLORO-3-METHYLPHENOL	0	200	166	ug/L	83	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q938222	A313337	ACENAPHTHENE	0	200	164	ug/L	82	
SPI02	Q938222	A313337	4-NITROPHENOL	0	200	82.8	ug/L	41.4	
SPI02	Q938222	A313337	2,4-DINITROTOLUENE	0	200	179	ug/L	89.5	
SPI02	Q938222	A313337	PENTACHLOROPHENOL	0	200	181	ug/L	90.5	
SPI02	Q938222	A313337	PYRENE	0	200	179	ug/L	89.5	
CCV	Q944899		See Attached Report g7679h.ind						
BLA02	Q944900		See Attached Report g7682h.ind						
LCS	Q938221	HLI	ACENAPHTHENE	100		83.5	ug/L	83.5	
LCS	Q938221	HLI	ACENAPHTHYLENE	100		71.9	ug/L	71.9	
LCS	Q938221	HLI	ANTHRACENE	100		77.4	ug/L	77.4	
LCS	Q938221	HLI	BENZO(A)PYRENE	100		77.7	ug/L	77.7	
LCS	Q938221	HLI	BENZO(B)FLUORANTHENE	100		76.8	ug/L	76.8	
LCS	Q938221	HLI	BENZO(G,H,I)PERYLENE	100		84.2	ug/L	84.2	
LCS	Q938221	HLI	BENZO(K)FLUORANTHENE	100		76.5	ug/L	76.5	
LCS	Q938221	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	100		84.5	ug/L	84.5	
LCS	Q938221	HLI	BIS(2-CHLOROETHOXY)METHANE	100		80.9	ug/L	80.9	
LCS	Q938221	HLI	BIS(2-CHLOROETHYL)ETHER	100		71.5	ug/L	71.5	
LCS	Q938221	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100		86.6	ug/L	86.6	
LCS	Q938221	HLI	4-BROMODIPHENYL ETHER	100		79.2	ug/L	79.2	
LCS	Q938221	HLI	CARBAZOLE	100		85	ug/L	85	
LCS	Q938221	HLI	4-CHLOROANILINE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	2-CHLORONAPHTHALENE	100		99.1	ug/L	99.1	
LCS	Q938221	HLI	4-CHLOROPHENYL-PHENYLETHER	100		81.8	ug/L	81.8	
LCS	Q938221	HLI	CHRYSENE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	DIBENZ(A,H)ANTHRACENE	100		98.4	ug/L	98.4	
LCS	Q938221	HLI	DIBENZOFURAN	100		81.2	ug/L	81.2	
LCS	Q938221	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	100		64.6	ug/L	64.6	
LCS	Q938221	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	100		64.8	ug/L	64.8	
LCS	Q938221	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	100		64.4	ug/L	64.4	
LCS	Q938221	HLI	3,3'-DICHLOROBENZIDINE	100		106	ug/L	106	
LCS	Q938221	HLI	DIETHYLPHTHALATE	100		69.8	ug/L	69.8	
LCS	Q938221	HLI	DIMETHYLPHTHALATE	100		47.5	ug/L	47.5	
LCS	Q938221	HLI	DI-N-BUTYLPHTHALATE	100		75.7	ug/L	75.7	
LCS	Q938221	HLI	2,4-DINITROTOLUENE	100		85.5	ug/L	85.5	
LCS	Q938221	HLI	2,6-DINITROTOLUENE	100		84.9	ug/L	84.9	
LCS	Q938221	HLI	DI-N-OCTYLPHTHALATE	100		71.6	ug/L	71.6	
LCS	Q938221	HLI	FLUORANTHENE	100		79.8	ug/L	79.8	
LCS	Q938221	HLI	FLUORENE	100		82.3	ug/L	82.3	
LCS	Q938221	HLI	HEXACHLOROBENZENE	100		79.3	ug/L	79.3	
LCS	Q938221	HLI	HEXACHLOROBUTADIENE	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	HEXACHLOROCYCLOPENTADIENE	100		111	ug/L	111	
LCS	Q938221	HLI	HEXACHLOROETHANE	100		65.5	ug/L	65.5	
LCS	Q938221	HLI	INDENO(1,2,3-CD)PYRENE	100		83.3	ug/L	83.3	
LCS	Q938221	HLI	ISOPHORONE	100		83.6	ug/L	83.6	
LCS	Q938221	HLI	2-METHYLNAPHTHALENE	100		78.5	ug/L	78.5	
LCS	Q938221	HLI	NAPHTHALENE	100		75.2	ug/L	75.2	
LCS	Q938221	HLI	2-NITROANILINE (O-NITROANILINE)	100		87.6	ug/L	87.6	
LCS	Q938221	HLI	3-NITROANILINE (M-NITROANILINE)	100		90.1	ug/L	90.1	
LCS	Q938221	HLI	4-NITROANILINE (P-NITROANILINE)	100		92.4	ug/L	92.4	
LCS	Q938221	HLI	NITROBENZENE	100		82.5	ug/L	82.5	
LCS	Q938221	HLI	N-NITROSODIPHENYLAMINE	100		158	ug/L	158	
LCS	Q938221	HLI	N-NITROSO-DI-N-PROPYLAMINE	100		80.3	ug/L	80.3	
LCS	Q938221	HLI	PHENANTHRENE	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	PYRENE	100		86.8	ug/L	86.8	
LCS	Q938221	HLI	1,2,4-TRICHLOROBENZENE	100		75.7	ug/L	75.7	
LCS	Q938221	HLI	2-CHLOROPHENOL	100		75.8	ug/L	75.8	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q938221	HLI	2,4-DICHLOROPHENOL	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	2,4-DIMETHYLPHENOL	100		53.3	ug/L	53.3	
LCS	Q938221	HLI	2,4-DINITROPHENOL	100		98.9	ug/L	98.9	
LCS	Q938221	HLI	2-METHYLPHENOL (O-CRESOL)	100		70.1	ug/L	70.1	
LCS	Q938221	HLI	4-METHYLPHENOL (P-CRESOL)	100		63.6	ug/L	63.6	
LCS	Q938221	HLI	2-NITROPHENOL	100		85	ug/L	85	
LCS	Q938221	HLI	4-NITROPHENOL	100		40.1	ug/L	40.1	
LCS	Q938221	HLI	PENTACHLOROPHENOL	100		85.1	ug/L	85.1	
LCS	Q938221	HLI	PHENOL	100		39.8	ug/L	39.8	
LCS	Q938221	HLI	2,4,5-TRICHLOROPHENOL	100		78.4	ug/L	78.4	
LCS	Q938221	HLI	2,4,6-TRICHLOROPHENOL	100		81.6	ug/L	81.6	
SAMPLE	A313419		See Certificate of Analysis						

Comments

Q938223 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q938222 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q939775	A313421	GAMMA-BHC (LINDANE)	0	.00048	.00044	mg/L	91.7	
SPI02	Q939775	A313421	HEPTACHLOR	0	.00048	.00051	mg/L	106.3	
SPI02	Q939775	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	
SPI02	Q939775	A313421	DIELDRIN	0	.001	.00113	mg/L	113	
SPI02	Q939775	A313421	ENDRIN	0	.001	.00117	mg/L	117	
SPI02	Q939775	A313421	4,4'-DDT	0	.001	.00101	mg/L	101	
DPS02	Q939796	A313421	GAMMA-BHC (LINDANE)	0	.00048	.000469	mg/L	97.7	[illegible]
DPS02	Q939796	A313421	HEPTACHLOR	0	.00048	.00052	mg/L	108.[illegible]	
DPS02	Q939796	A313421	ALDRIN	0	.00048	.00054	mg/L	11[illegible]	[illegible]
DPS02	Q939796	A313421	DIELDRIN	0	.001	.00118	mg/L	118	4.3
DPS02	Q939796	A313421	ENDRIN	0	.001	.00128	mg/L	128	9
DPS02	Q939796	A313421	4,4'-DDT	0	.001	.00094	mg/L	94	7.2
BLA02	Q939793		ALPHA-BHC			< .00002	mg/L		
BLA02	Q939793		BETA-BHC			< .00002	mg/L		
BLA02	Q939793		DELTA-BHC			< .00002	mg/L		
BLA02	Q939793		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR			< .00002	mg/L		
BLA02	Q939793		ALDRIN			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q939793		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q939793		DIELDRIN			< .00004	mg/L		
BLA02	Q939793		4,4'-DDE			< .00004	mg/L		
BLA02	Q939793		ENDRIN			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q939793		4,4'-DDD			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q939793		4,4'-DDT			< .00004	mg/L		
BLA02	Q939793		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q939793		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q939793		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		TOXAPHENE			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313419

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q939793		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q939794		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	Q939794		HEPTACHLOR	.0005		.00051	mg/L	102	
LCS	Q939794		ALDRIN	.0005		.00052	mg/L	104	
LCS	Q939794		DIELDRIN	.001		.0012	mg/L	120	
LCS	Q939794		ENDRIN	.001		.0012	mg/L	120	
LCS	Q939794		4,4'-DDT	.001		.00099	mg/L	99	
SAMPLE	A313419		See Certificate of Analysis						

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Zimmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313420
	Complete	PO Number
	01-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	04-JUN-94 11:00

Sample Description

SAMPLE ID: SW-060494-WP-004
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : C. BOYLE — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
SPI02	Q941046	A313422	CYANIDE	0	.1	.086	mg/L	86	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941016		CYANIDE	.1		.096	mg/L	96	
BLA01	Q941037		CYANIDE			-.0003	mg/L		
BLA02	Q940937		CYANIDE			.005	mg/L		
LFB02	Q940962		CYANIDE	.3		.247	mg/L	82.3	
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q941044		CYANIDE	.1		.095	mg/L	95	
BLA01	Q941045		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 10-JUN-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 13-JUN-94 — File ID: — Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	ALUMINUM	2.00		2.03	mg/L	102	
ICV01	Q940579	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP02	Q935524	A313423	ALUMINUM	.536		.492	mg/L		9
SPI02	Q935522	A313423	ALUMINUM	.536	2	2.44	mg/L	95	
CDL01	Q940565	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q940564	PERKIN ELM	ALUMINUM	500		516.	mg/L	103	
CCV	Q940622	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935520	SPEX	ALUMINUM	20.0		18.3	mg/L	92	
BLA02	Q935521	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940617	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q940558	PERKIN ELM	ALUMINUM	500		502.	mg/L	100	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	ANTIMONY	0.400		0.394	mg/L	99
DUP02	Q935524	A313423	ANTIMONY	0		BDL	mg/L	
SPI02	Q935522	A313423	ANTIMONY	0	0.500	0.465	mg/L	93
CDL01	Q940566	PERKIN ELM	ANTIMONY	0.120		0.130	mg/L	108
CCV	Q940622	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940621	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q935520	SPEX	ANTIMONY	5.00		4.45	mg/L	89
BLA02	Q935521	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A313420		See Certificate of Analysis					
CCV	Q940618	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940617	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q940556	PERKIN ELM	ANTIMONY	0.120		0.133	mg/L	111

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	BARIUM	2.00		2.09	mg/L	105	
ICV01	Q940579	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q935524	A313423	BARIUM	.0192		.0192	mg/L		0
SPI02	Q935522	A313423	BARIUM	.0192	2	1.97	mg/L	98	
CDL01	Q940565	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q940564	PERKIN ELM	BARIUM	0.500		0.519	mg/L	104	
CCV	Q940622	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940621	NA	BARIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	Q935521	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q940558	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	BERYLLIUM	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	BERYLLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	BERYLLIUM	0	0.050	0.0517	mg/L	103	
CDL01	Q940565	INORGANIC	BERYLLIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	BERYLLIUM	5.00		5.16	mg/L	103	
BLA01	Q940621	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935520	SPEX	BERYLLIUM	0.500		0.476	mg/L	95	
BLA02	Q935521	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	Q940617	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	BERYLLIUM	0.010		0.0109	mg/L	109	
ICS-A	Q940558	PERKIN ELM	BERYLLIUM	0.500		0.492	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CADMIUM	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	CADMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CADMIUM	0	0.050	0.0428	mg/L	86	
CDL01	Q940565	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CADMIUM	1.00		0.922	mg/L	92	
CCV	Q940622	INORGANIC	CADMIUM	5.00		5.10	mg/L	102	
BLA01	Q940621	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935525	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q935526	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	Q940617	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	CADMIUM	0.010		0.0123	mg/L	123	
ICS-A	Q940558	PERKIN ELM	CADMIUM	1.00		0.890	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	CALCIUM	100		98.2	mg/L	98	
DUP02	Q935524	A313423	CALCIUM	28.9		29.2	mg/L		1
SPI02	Q935522	A313423	CALCIUM	28.9	100	121	mg/L	92	
ICS-A	Q940564	PERKIN ELM	CALCIUM	500		476.	mg/L	95	
CCV	Q940622	INORGANIC	CALCIUM	50.0		50.9	mg/L	102	
BLA01	Q940621	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	CALCIUM	100		91.3	mg/L	91	
BLA02	Q935521	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q940617	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CHROMIUM	0.400		0.421	mg/L	105	
DUP02	Q935524	A313423	CHROMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q940565	INORGANIC	CHROMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	Q940622	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	Q940621	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	CHROMIUM	2.00		1.89	mg/L	95	
BLA02	Q935521	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	Q940617	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	CHROMIUM	0.020		0.0261	mg/L	131	
ICS-A	Q940558	PERKIN ELM	CHROMIUM	0.500		0.478	mg/L	96	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	COBALT	0.400		0.419	mg/L	105
DUP02	Q935524	A313423	COBALT	0		BDL	mg/L	
SPI02	Q935522	A313423	COBALT	0	0.500	0.480	mg/L	96
CDL01	Q940565	INORGANIC	COBALT	10		9.97	mg/L	100
ICS-A	Q940564	PERKIN ELM	COBALT	0.500		0.474	mg/L	95
CCV	Q940622	INORGANIC	COBALT	5.00		5.05	mg/L	101
BLA01	Q940621	NA	COBALT			< 0.004	mg/L	
LCS	Q935520	SPEX	COBALT	5.00		4.59	mg/L	92
BLA02	Q935521	NA	COBALT			< 0.004	mg/L	
SAMPLE	A313420		See Certificate of Analysis					
CCV	Q940618	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	Q940617	NA	COBALT			< 0.004	mg/L	
CDL01	Q940556	PERKIN ELM	COBALT	0.100		0.114	mg/L	114
ICS-A	Q940558	PERKIN ELM	COBALT	0.500		0.460	mg/L	92

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	COPPER	0		BDL	mg/L		
SPI02	Q935522	A313423	COPPER	0	0.250	0.245	mg/L	98	
CDL01	Q944473	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q944472	PERKIN ELM	COPPER	0.500		0.513	mg/L	103	
CCV	Q944451	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944450	NA	COPPER			< 0.008	mg/L		
LCS	Q935520	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q935521	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q944441	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944440	NA	COPPER			< 0.008	mg/L		

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	IRON	1.1		1.04	mg/L		6
SPI02	Q935522	A313423	IRON	1.1	1	1.95	mg/L	85	
CDL01	Q940565	INORGANIC	IRON	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	IRON	200		189.	mg/L	95	
CCV	Q940622	INORGANIC	IRON	5.00		5.44	mg/L	109	
BLA01	Q940621	NA	IRON			< 0.01	mg/L		
LCS	Q935520	SPEX	IRON	10.0		9.67	mg/L	97	
BLA02	Q935521	NA	IRON			< 0.01	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	IRON	5.00		5.47	mg/L	109	
BLA01	Q940617	NA	IRON			< 0.01	mg/L		
ICS-A	Q940558	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	MAGNESIUM	100		99.8	mg/L	100	
DUP02	Q935524	A313423	MAGNESIUM	14.9		15.1	mg/L		1
SPI02	Q935522	A313423	MAGNESIUM	14.9	100	108	mg/L	93	
ICS-A	Q940564	PERKIN ELM	MAGNESIUM	500		492.	mg/L	98	
CCV	Q940622	INORGANIC	MAGNESIUM	50.0		50.2	mg/L	100	
BLA01	Q940621	NA	MAGNESIUM			.256	mg/L		
LCS	Q935520	SPEX	MAGNESIUM	100		90.7	mg/L	91	
BLA02	Q935521	NA	MAGNESIUM			.224	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q940617	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	MAGNESIUM	500		494.	mg/L	99	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	MANGANESE	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	MANGANESE	.0566		.0566	mg/L		0
SPI02	Q935522	A313423	MANGANESE	.0566	.5	.535	mg/L	96	
CDL01	Q940565	INORGANIC	MANGANESE	10		9.99	mg/L	100	
ICS-A	Q940564	PERKIN ELM	MANGANESE	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	MANGANESE	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935520	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	MANGANESE	0.030		0.0369	mg/L	123	
ICS-A	Q940558	PERKIN ELM	MANGANESE	0.500		0.492	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	NICKEL	0.400		0.410	mg/L	103	
DUP02	Q935524	A313423	NICKEL	.0156		BDL	mg/L		44
SPI02	Q935522	A313423	NICKEL	.0156	.5	.466	mg/L	90	
CDL01	Q944473	INORGANIC	NICKEL	10		10.1	mg/L	101	
ICS-A	Q944472	PERKIN ELM	NICKEL	1.00		0.871	mg/L	87	
CCV	Q944451	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944450	NA	NICKEL			< 0.004	mg/L		
LCS	Q935520	SPEX	NICKEL	5.00		4.46	mg/L	89	
BLA02	Q935521	NA	NICKEL			.01	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q944441	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944440	NA	NICKEL			< 0.004	mg/L		
CDL01	Q944417	PERKIN ELM	NICKEL	0.080		0.114	mg/L	143	
ICS-A	Q944416	PERKIN ELM	NICKEL	1.00		0.943	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q940674	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	Q940568	SPEX	POTASSIUM	100		103.	mg/L	103	
ICV01	Q940579	PERKIN ELM	POTASSIUM	20.0		19.2	mg/L	96	
DUP02	Q935524	A313423	POTASSIUM	2.05		1.93	mg/L		6
SPI02	Q935522	A313423	POTASSIUM	2.05	100	95.3	mg/L	93	
CCV	Q940622	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940621	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	POTASSIUM	100		90.1	mg/L	90	
BLA02	Q935521	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940617	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	SILVER	2.00		2.04	mg/L	102	
DUP02	Q942774	A313423	SILVER	0		BDL	mg/L		
SPI02	Q942772	A313423	SILVER	0	0.050	0.0501	mg/L	100	
CDL01	Q944741	INORGANIC	SILVER	2		2.03	mg/L	102	
ICS-A	Q944740	PERKIN ELM	SILVER	1.00		0.992	mg/L	99	
CCV	Q944737	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	Q944736	NA	SILVER			< 0.004	mg/L		
LCS	Q942770	SPEX	SILVER	0.500		0.466	mg/L	93	
BLA02	Q942771	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q944723	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q944720	NA	SILVER			< 0.004	mg/L		
CDL01	Q944756	PERKIN ELM	SILVER	0.020		0.0254	mg/L	127	
ICS-A	Q944755	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	SODIUM	2		2.04	mg/L	102	
ICV01	Q940568	SPEX	SODIUM	100		102.	mg/L	102	
ICV01	Q940579	PERKIN ELM	SODIUM	2		1.88	mg/L	94	
DUP02	Q935524	A313423	SODIUM	4.47		4.56	mg/L		2
SPI02	Q935522	A313423	SODIUM	4.47	100	97.5	mg/L	93	
CCV	Q940622	INORGANIC	SODIUM	50.0		49.2	mg/L	98	
BLA01	Q940621	NA	SODIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	SODIUM	100		90.9	mg/L	91	
BLA02	Q935521	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	Q940618	INORGANIC	SODIUM	50.0		49.0	mg/L	98	
BLA01	Q940617	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	VANADIUM	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	VANADIUM	0		BDL	mg/L		
SPI02	0935522	A313423	VANADIUM	0	0.500	0.483	mg/L	97	
CDL01	0940565	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	0940564	PERKIN ELM	VANADIUM	0.500		0.483	mg/L	97	
CCV	0940622	INORGANIC	VANADIUM	5.00		5.05	mg/L	101	
BLA01	0940621	NA	VANADIUM			< 0.004	mg/L		
LCS	0935520	SPEX	VANADIUM	5.00		4.60	mg/L	92	
BLA02	0935521	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	0940618	INORGANIC	VANADIUM	5.00		5.03	mg/L	101	
BLA01	0940617	NA	VANADIUM			< 0.004	mg/L		
CDL01	0940556	PERKIN ELM	VANADIUM	0.100		0.110	mg/L	110	
ICS-A	0940558	PERKIN ELM	VANADIUM	0.500		0.476	mg/L	95	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	ZINC	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	ZINC	0		BDL	mg/L		
SPI02	0935522	A313423	ZINC	0	0.500	0.498	mg/L	100	
CDL01	0940565	INORGANIC	ZINC	10		9.93	mg/L	99	
ICS-A	0940564	PERKIN ELM	ZINC	1.00		1.03	mg/L	103	
CCV	0940622	INORGANIC	ZINC	5.00		5.11	mg/L	102	
BLA01	0940621	NA	ZINC			< 0.008	mg/L		
LCS	0935520	SPEX	ZINC	5.00		4.57	mg/L	91	
BLA02	0935521	NA	ZINC			.0231	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	0940618	INORGANIC	ZINC	5.00		5.08	mg/L	102	
BLA01	0940617	NA	ZINC			< 0.008	mg/L		
ICS-A	0940558	PERKIN ELM	ZINC	1.00		1.00	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	ARSENIC	.04		0.0398	mg/L	100	
DUP02	0935524	A313423	ARSENIC	0		BDL	mg/L		
SPI02	0935522	A313423	ARSENIC	0	2	2.05	mg/L	103	
CDL01	0947033	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	0947032	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	0947031	NA	ARSENIC			< 0.002	mg/L		
LCS	0935525	INORGANIC	ARSENIC	.5		0.483	mg/L	97	
BLA02	0935526	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	0947028	INORGANIC	ARSENIC	.1		0.105	mg/L	105	
BLA01	0947027	NA	ARSENIC			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	ARSENIC	.02		0.0225	mg/L	113	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0947037	PERKIN-ELM	LEAD	.04		0.0406	mg/L	102
DUP02	0935524	A313423	LEAD	0		BDL	mg/L	
SPI02	0935522	A313423	LEAD	0	0.500	0.477	mg/L	95
ICS-A	0947040	PERKIN ELM	LEAD	1		0.954	mg/L	95
CDL01	0947033	INORGANIC	LEAD	.5		0.501	mg/L	100
CCV	0947032	INORGANIC	LEAD	.1		0.102	mg/L	102
BLA01	0947031	NA	LEAD			< 0.002	mg/L	
LCS	0935525	INORGANIC	LEAD	.5		0.492	mg/L	98
BLA02	0935526	NA	LEAD			< 0.002	mg/L	
SAMPLE	A313420		See Certificate of Analysis					
CCV	0947028	INORGANIC	LEAD	.1		0.103	mg/L	103
BLA01	0947027	NA	LEAD			< 0.002	mg/L	
CDL01	0947025	PERKIN-ELM	LEAD	.006		0.00571	mg/L	95
ICS-A	0947024	PERKIN ELM	LEAD	1		0.959	mg/L	96

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	SELENIUM	.04		0.0402	mg/L	101	
DUP02	0935524	A313423	SELENIUM	0		BDL	mg/L		
SPI02	0935522	A313423	SELENIUM	0	2	2.02	mg/L	101	
CDL01	0947033	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	0947032	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	0947031	NA	SELENIUM			< 0.002	mg/L		
LCS	0935525	INORGANIC	SELENIUM	.5		0.478	mg/L	96	
BLA02	0935526	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	0947028	INORGANIC	SELENIUM	.1		0.105	mg/L	105	
BLA01	0947027	NA	SELENIUM			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	THALLIUM	.04		0.0399	mg/L	100	
DUP02	0935524	A313423	THALLIUM	0		BDL	mg/L		
SPI02	0935522	A313423	THALLIUM	0	3.00	2.57	mg/L	86	
CDL01	0947033	INORGANIC	THALLIUM	.5		0.502	mg/L	100	
CCV	0947032	INORGANIC	THALLIUM	.1		0.101	mg/L	101	
BLA01	0947031	NA	THALLIUM			< 0.004	mg/L		
LCS	0935525	INORGANIC	THALLIUM	.5		0.487	mg/L	97	
BLA02	0935526	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
CCV	0947028	INORGANIC	THALLIUM	.1		0.0987	mg/L	99	
BLA01	0947027	NA	THALLIUM			< 0.004	mg/L		
CDL01	0947025	PERKIN-ELM	THALLIUM	.02		.0253	mg/L	127	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 14-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: S. O'NEAL Review Date: 16-JUN-94 File ID: 000695 Run: R220343

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943995		MERCURY	.00147		.00156	mg/L	106.1	
DUP02	Q939762	A313419	MERCURY	0		BDL	mg/L		
SPI02	Q939760	A313419	MERCURY	0	.001	.000936	mg/L	93.6	
CDL01	Q943999		MERCURY	.0002		.000214	mg/L	107	
CCV	Q944022		MERCURY	.003		.0026	mg/L	86.7	
BLA01	Q944023		MERCURY			< .00008	mg/L		
LCS	Q939758		MERCURY	.003		.00272	mg/L	90.7	
BLA02	Q939759		MERCURY			< .00008	mg/L		
SAMPLE	A313420		See Certificate of Analysis						
BLA01	Q944024		MERCURY			< .00008	mg/L		
CCV	Q944025		MERCURY	.003		.00282	mg/L	94	
CDL01	Q944026		MERCURY	.0002		.000183	mg/L	91.5	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >6148J Run: R220046

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q946126	A313421	BENZENE	0	10	9.74	ug/L	97.4	
SPI01	Q946126	A313421	CARBON TETRACHLORIDE	0	10	8.77	ug/L	87.7	
SPI01	Q946126	A313421	1,2-DICHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	Q946126	A313421	1,1-DICHLOROETHENE	0	10	9.64	ug/L	96.4	
SPI01	Q946126	A313421	1,1,1-TRICHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	Q946126	A313421	TRICHLOROETHENE	0	10	10.2	ug/L	102	
SPI01	Q946126	A313421	VINYL CHLORIDE	0	10	9.35	ug/L	93.5	
SPI01	Q946126	A313421	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	BROMOFORM	0	10	9.51	ug/L	95.1	
SPI01	Q946126	A313421	BROMOMETHANE	0	10	9.66	ug/L	96.6	
SPI01	Q946126	A313421	CHLOROBENZENE	0	10	9.64	ug/L	96.4	
SPI01	Q946126	A313421	DIBROMOCHLOROMETHANE	0	10	9.44	ug/L	94.4	
SPI01	Q946126	A313421	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	Q946126	A313421	CHLOROFORM	0	10	10.7	ug/L	107	
SPI01	Q946126	A313421	CHLOROMETHANE	0	10	9.43	ug/L	94.3	
SPI01	Q946126	A313421	TRANS-1,2-DICHLOROETHENE	0	10	9.68	ug/L	96.8	
SPI01	Q946126	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	Q946126	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.3	ug/L	103	
SPI01	Q946126	A313421	1,1-DICHLOROETHANE	0	10	10.2	ug/L	102	
SPI01	Q946126	A313421	1,2-DICHLOROPROPANE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.6	ug/L	106	
SPI01	Q946126	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	11	ug/L	110	
SPI01	Q946126	A313421	ETHYL BENZENE	0	10	9.24	ug/L	92.4	
SPI01	Q946126	A313421	STYRENE	0	10	9.43	ug/L	94.3	
SPI01	Q946126	A313421	1,1,2-TRICHLOROETHANE	0	10	11.3	ug/L	113	
SPI01	Q946126	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	Q946126	A313421	TETRACHLOROETHENE	0	10	9.05	ug/L	90.5	
SPI01	Q946126	A313421	TOLUENE	0	10	10.5	ug/L	105	
SPI01	Q946126	A313421	ACETONE	7.5	10	19.9	ug/L	124	
SPI01	Q946126	A313421	CARBON DISULFIDE	0	10	9.25	ug/L	92.5	
SPI01	Q946126	A313421	4-METHYL-2-PENTANONE	0	10	8.98	ug/L	89.8	
SPI01	Q946126	A313421	2-HEXANONE	0	10	10.9	ug/L	109	
DPS01	Q946127	A313421	BENZENE	0	10	9.93	ug/L	99.3	1.9
DPS01	Q946127	A313421	CARBON TETRACHLORIDE	0	10	9.36	ug/L	93.6	6.5
DPS01	Q946127	A313421	1,2-DICHLOROETHANE	0	10	10.1	ug/L	101	6.7
DPS01	Q946127	A313421	1,1-DICHLOROETHENE	0	10	10.5	ug/L	105	8.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q946127	A313421	1,1,1-TRICHLOROETHANE	0	10	10.1	ug/L	101	3.1
DPS01	Q946127	A313421	TRICHLOROETHENE	0	10	10.9	ug/L	109	6.6
DPS01	Q946127	A313421	VINYL CHLORIDE	0	10	10.2	ug/L	102	
DPS01	Q946127	A313421	BROMODICHLOROMETHANE	0	10	10.3	ug/L	103	
DPS01	Q946127	A313421	BROMOFORM	0	10	9.42	ug/L	94.2	1
DPS01	Q946127	A313421	BROMOMETHANE	0	10	10.1	ug/L	101	4.5
DPS01	Q946127	A313421	CHLOROBENZENE	0	10	10.1	ug/L	101	4.7
DPS01	Q946127	A313421	DIBROMOCHLOROMETHANE	0	10	9.3	ug/L	93	1.5
DPS01	Q946127	A313421	CHLOROETHANE	0	10	10.5	ug/L	105	7
DPS01	Q946127	A313421	CHLOROFORM	0	10	10.4	ug/L	104	2.8
DPS01	Q946127	A313421	CHLOROMETHANE	0	10	10.1	ug/L	101	6.9
DPS01	Q946127	A313421	TRANS-1,2-DICHLOROETHENE	0	10	10.4	ug/L	104	7.2
DPS01	Q946127	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	0
DPS01	Q946127	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.2	ug/L	102	1
DPS01	Q946127	A313421	1,1-DICHLOROETHANE	0	10	10.4	ug/L	104	1.9
DPS01	Q946127	A313421	1,2-DICHLOROPROPANE	0	10	10.5	ug/L	105	.9
DPS01	Q946127	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.3	ug/L	103	2.9
DPS01	Q946127	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	5.6
DPS01	Q946127	A313421	ETHYL BENZENE	0	10	9.99	ug/L	99.9	7.8
DPS01	Q946127	A313421	STYRENE	0	10	9.65	ug/L	96.5	2.3
DPS01	Q946127	A313421	1,1,2-TRICHLOROETHANE	0	10	10.5	ug/L	105	7.3
DPS01	Q946127	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	0
DPS01	Q946127	A313421	TETRACHLOROETHENE	0	10	10	ug/L	100	10
DPS01	Q946127	A313421	TOLUENE	0	10	10.7	ug/L	107	1.9
DPS01	Q946127	A313421	ACETONE	7.5	10	16.3	ug/L	88	34
DPS01	Q946127	A313421	CARBON DISULFIDE	0	10	9.74	ug/L	97.4	5.2
DPS01	Q946127	A313421	4-METHYL-2-PENTANONE	0	10	8.28	ug/L	82.8	8.1
DPS01	Q946127	A313421	2-HEXANONE	0	10	10.5	ug/L	105	7
CCV	Q941730		See Attached Report g6141j.ind						
BLA01	Q941731		See Attached Report g6142j.ind						
SAMPLE	A313420		See Certificate of Analysis						

Comments

Q946126 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q946127 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 20-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 22-JUN-94 File ID: >6796F Run: R221127

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q938222	A313337	PHENOL	0	200	81	ug/L	40.5	
SP102	Q938222	A313337	2-CHLOROPHENOL	0	200	157	ug/L	78.5	
SP102	Q938222	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	149	ug/L	74.5	
SP102	Q938222	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	166	ug/L	83	
SP102	Q938222	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	
SP102	Q938222	A313337	4-CHLORO-3-METHYLPHENOL	0	200	166	ug/L	83	
SP102	Q938222	A313337	ACENAPHTHENE	0	200	164	ug/L	82	
SP102	Q938222	A313337	4-NITROPHENOL	0	200	82.8	ug/L	41.4	
SP102	Q938222	A313337	2,4-DINITROTOLUENE	0	200	179	ug/L	89.5	
SP102	Q938222	A313337	PENTACHLOROPHENOL	0	200	181	ug/L	90.5	
SP102	Q938222	A313337	PYRENE	0	200	179	ug/L	89.5	
DPS02	Q938223	A313337	PHENOL	0	200	73.5	ug/L	36.8	9.6
DPS02	Q938223	A313337	2-CHLOROPHENOL	0	200	154	ug/L	77	1.9
DPS02	Q938223	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	146	ug/L	73	
DPS02	Q938223	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	163	ug/L	81.5	1.8
DPS02	Q938223	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	0
DPS02	Q938223	A313337	4-CHLORO-3-METHYLPHENOL	0	200	157	ug/L	78.5	5.6

QC Type	Identifier	Source	Parameter	True/Sampt	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q938223	A313337	ACENAPHTHENE	0	200	159	ug/L	79.5	3.1
DPS02	Q938223	A313337	4-NITROPHENOL	0	200	70.7	ug/L	35.4	15.6
DPS02	Q938223	A313337	2,4-DINITROTOLUENE	0	200	171	ug/L	85.5	4.6
DPS02	Q938223	A313337	PENTACHLOROPHENOL	0	200	175	ug/L	87.5	3.4
DPS02	Q938223	A313337	PYRENE	0	200	181	ug/L	90.5	1.1
CCV	Q949061		See Attached Report g6795f.ind						
BLA02	Q944900		See Attached Report g7682h.ind						
SAMPLE	A313420		See Certificate of Analysis						
LCS	Q938221	HLI	ACENAPHTHENE	100		83.5	ug/L	83.5	
LCS	Q938221	HLI	ACENAPHTHYLENE	100		71.9	ug/L	71.9	
LCS	Q938221	HLI	ANTHRACENE	100		77.4	ug/L	77.4	
LCS	Q938221	HLI	BENZO(A)PYRENE	100		77.7	ug/L	77.7	
LCS	Q938221	HLI	BENZO(B)FLUORANTHENE	100		76.8	ug/L	76.8	
LCS	Q938221	HLI	BENZO(G,H,I)PERYLENE	100		84.2	ug/L	84.2	
LCS	Q938221	HLI	BENZO(K)FLUORANTHENE	100		76.5	ug/L	76.5	
LCS	Q938221	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	100		84.5	ug/L	84.5	
LCS	Q938221	HLI	BIS(2-CHLOROETHOXY)METHANE	100		80.9	ug/L	80.9	
LCS	Q938221	HLI	BIS(2-CHLOROETHYL)ETHER	100		71.5	ug/L	71.5	
LCS	Q938221	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100		86.6	ug/L	86.6	
LCS	Q938221	HLI	4-BROMODIPHENYL ETHER	100		79.2	ug/L	79.2	
LCS	Q938221	HLI	CARBAZOLE	100		85	ug/L	85	
LCS	Q938221	HLI	4-CHLOROANILINE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	2-CHLORONAPHTHALENE	100		99.1	ug/L	99.1	
LCS	Q938221	HLI	4-CHLOROPHENYL-PHENYLETHER	100		81.8	ug/L	81.8	
LCS	Q938221	HLI	CHRYSENE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	DIBENZ(A,H)ANTHRACENE	100		98.4	ug/L	98.4	
LCS	Q938221	HLI	DIBENZOFURAN	100		81.2	ug/L	81.2	
LCS	Q938221	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	100		64.6	ug/L	64.6	
LCS	Q938221	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	100		64.8	ug/L	64.8	
LCS	Q938221	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	100		64.4	ug/L	64.4	
LCS	Q938221	HLI	3,3'-DICHLOROBENZIDINE	100		106	ug/L	106	
LCS	Q938221	HLI	DIETHYLPHTHALATE	100		69.8	ug/L	69.8	
LCS	Q938221	HLI	DIMETHYLPHTHALATE	100		47.5	ug/L	47.5	
LCS	Q938221	HLI	DI-N-BUTYLPHTHALATE	100		75.7	ug/L	75.7	
LCS	Q938221	HLI	2,4-DINITROTOLUENE	100		85.5	ug/L	85.5	
LCS	Q938221	HLI	2,6-DINITROTOLUENE	100		84.9	ug/L	84.9	
LCS	Q938221	HLI	DI-N-OCTYLPHTHALATE	100		71.6	ug/L	71.6	
LCS	Q938221	HLI	FLUORANTHENE	100		79.8	ug/L	79.8	
LCS	Q938221	HLI	FLUORENE	100		82.3	ug/L	82.3	
LCS	Q938221	HLI	HEXACHLOROBENZENE	100		79.3	ug/L	79.3	
LCS	Q938221	HLI	HEXACHLOROBUTADIENE	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	HEXACHLOROCYCLOPENTADIENE	100		111	ug/L	111	
LCS	Q938221	HLI	HEXACHLOROETHANE	100		65.5	ug/L	65.5	
LCS	Q938221	HLI	INDENO(1,2,3-CD)PYRENE	100		83.3	ug/L	83.3	
LCS	Q938221	HLI	ISOPHORONE	100		83.6	ug/L	83.6	
LCS	Q938221	HLI	2-METHYLNAPHTHALENE	100		78.5	ug/L	78.5	
LCS	Q938221	HLI	NAPHTHALENE	100		75.2	ug/L	75.2	
LCS	Q938221	HLI	2-NITROANILINE (O-NITROANILINE)	100		87.6	ug/L	87.6	
LCS	Q938221	HLI	3-NITROANILINE (M-NITROANILINE)	100		90.1	ug/L	90.1	
LCS	Q938221	HLI	4-NITROANILINE (P-NITROANILINE)	100		92.4	ug/L	92.4	
LCS	Q938221	HLI	NITROBENZENE	100		82.5	ug/L	82.5	
LCS	Q938221	HLI	N-NITROSODIPHENYLAMINE	100		158	ug/L	158	
LCS	Q938221	HLI	N-NITROSO-DI-N-PROPYLAMINE	100		80.3	ug/L	80.3	
LCS	Q938221	HLI	PHENANTHRENE	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	PYRENE	100		86.8	ug/L	86.8	
LCS	Q938221	HLI	1,2,4-TRICHLOROBENZENE	100		75.7	ug/L	75.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q938221	HLI	2-CHLOROPHENOL	100		75.8	ug/L	75.8	
LCS	Q938221	HLI	2,4-DICHLOROPHENOL	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	2,4-DIMETHYLPHENOL	100		53.3	ug/L	53.3	
LCS	Q938221	HLI	2,4-DINITROPHENOL	100		98.9	ug/L	98.9	
LCS	Q938221	HLI	2-METHYLPHENOL (O-CRESOL)	100		70.1	ug/L	70.1	
LCS	Q938221	HLI	4-METHYLPHENOL (P-CRESOL)	100		63.6	ug/L	63.6	
LCS	Q938221	HLI	2-NITROPHENOL	100		85	ug/L	85	
LCS	Q938221	HLI	4-NITROPHENOL	100		40.1	ug/L	40.1	
LCS	Q938221	HLI	PENTACHLOROPHENOL	100		85.1	ug/L	85.1	
LCS	Q938221	HLI	PHENOL	100		39.8	ug/L	39.8	
LCS	Q938221	HLI	2,4,5-TRICHLOROPHENOL	100		78.4	ug/L	78.4	
LCS	Q938221	HLI	2,4,6-TRICHLOROPHENOL	100		81.6	ug/L	81.6	

Comments

Q938222 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q938223 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q939775	A313421	GAMMA-BHC (LINDANE)	0	.00048	.00044	mg/L	91.7	
SPI02	Q939775	A313421	HEPTACHLOR	0	.00048	.00051	mg/L	106.3	
SPI02	Q939775	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	
SPI02	Q939775	A313421	DIELDRIN	0	.001	.00113	mg/L	113	
SPI02	Q939775	A313421	ENDRIN	0	.001	.00117	mg/L	117	
SPI02	Q939775	A313421	4,4'-DDT	0	.001	.00101	mg/L	101	
DPS02	Q939796	A313421	GAMMA-BHC (LINDANE)	0	.00048	.000469	mg/L	97.7	4.3
DPS02	Q939796	A313421	HEPTACHLOR	0	.00048	.00052	mg/L	108.3	9
DPS02	Q939796	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	0
DPS02	Q939796	A313421	DIELDRIN	0	.001	.00118	mg/L	118	4.3
DPS02	Q939796	A313421	ENDRIN	0	.001	.00128	mg/L	128	9
DPS02	Q939796	A313421	4,4'-DDT	0	.001	.00094	mg/L	94	7.2
BLA02	Q939793		ALPHA-BHC			< .00002	mg/L		
BLA02	Q939793		BETA-BHC			< .00002	mg/L		
BLA02	Q939793		DELTA-BHC			< .00002	mg/L		
BLA02	Q939793		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR			< .00002	mg/L		
BLA02	Q939793		ALDRIN			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q939793		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q939793		DIELDRIN			< .00004	mg/L		
BLA02	Q939793		4,4'-DDE			< .00004	mg/L		
BLA02	Q939793		ENDRIN			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q939793		4,4'-DDD			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q939793		4,4'-DDT			< .00004	mg/L		
BLA02	Q939793		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q939793		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q939793		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		TOXAPHENE			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1242			< .0002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q939793		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q939794		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	Q939794		HEPTACHLOR	.0005		.00051	mg/L	102	
LCS	Q939794		ALDRIN	.0005		.00052	mg/L	104	
LCS	Q939794		DIELDRIN	.001		.0012	mg/L	120	
LCS	Q939794		ENDRIN	.001		.0012	mg/L	120	
LCS	Q939794		4,4'-DDT	.001		.00099	mg/L	99	
SAMPLE	A313420		See Certificate of Analysis						

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313421
	Complete	PO Number
	01-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	04-JUN-94 11:00

Sample Description

SAMPLE ID: SW-060494-WP-027
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : C. BOYLE — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
SPI02	Q941046	A313422	CYANIDE	0	.1	.086	mg/L	86	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941044		CYANIDE	.1		.095	mg/L	95	
BLA01	Q941045		CYANIDE			-.0003	mg/L		
BLA02	Q940937		CYANIDE			.005	mg/L		
LFB02	Q940962		CYANIDE	.3		.247	mg/L	82.3	
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q941060		CYANIDE	.1		.096	mg/L	96	
BLA01	Q941061		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : M. JAD — Analysis Date: 10-JUN-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 13-JUN-94 — File ID: — Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	ALUMINUM	2.00		2.03	mg/L	102	
ICV01	Q940579	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP02	Q935524	A313423	ALUMINUM	.536		.492	mg/L		9
SPI02	Q935522	A313423	ALUMINUM	.536	2	2.44	mg/L	95	
CDL01	Q940565	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q940564	PERKIN ELM	ALUMINUM	500		516.	mg/L	103	
CCV	Q940622	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935520	SPEX	ALUMINUM	20.0		18.3	mg/L	92	
BLA02	Q935521	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	Q940617	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q940558	PERKIN ELM	ALUMINUM	500		502.	mg/L	100	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	ANTIMONY	0.400		0.394	mg/L	99
DUP02	Q935524	A313423	ANTIMONY	0		BDL	mg/L	
SPI02	Q935522	A313423	ANTIMONY	0	0.500	0.465	mg/L	93
CDL01	Q940566	PERKIN ELM	ANTIMONY	0.120		0.130	mg/L	108
CCV	Q940622	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940621	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q935520	SPEX	ANTIMONY	5.00		4.45	mg/L	89
BLA02	Q935521	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A313421		See Certificate of Analysis					
CCV	Q940618	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940617	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q940556	PERKIN ELM	ANTIMONY	0.120		0.133	mg/L	111

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	BARIUM	2.00		2.09	mg/L	105	
ICV01	Q940579	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q935524	A313423	BARIUM	.0192		.0192	mg/L		0
SPI02	Q935522	A313423	BARIUM	.0192	2	1.97	mg/L	98	
CDL01	Q940565	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q940564	PERKIN ELM	BARIUM	0.500		0.519	mg/L	104	
CCV	Q940622	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940621	NA	BARIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	Q935521	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q940558	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	BERYLLIUM	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	BERYLLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	BERYLLIUM	0	0.050	0.0517	mg/L	103	
CDL01	Q940565	INORGANIC	BERYLLIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	BERYLLIUM	5.00		5.16	mg/L	103	
BLA01	Q940621	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935520	SPEX	BERYLLIUM	0.500		0.476	mg/L	95	
BLA02	Q935521	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	Q940617	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	BERYLLIUM	0.010		0.0109	mg/L	109	
ICS-A	Q940558	PERKIN ELM	BERYLLIUM	0.500		0.492	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CADMIUM	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	CADMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CADMIUM	0	0.050	0.0428	mg/L	86	
CDL01	Q940565	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CADMIUM	1.00		0.922	mg/L	92	
CCV	Q940622	INORGANIC	CADMIUM	5.00		5.10	mg/L	102	
BLA01	Q940621	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935525	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q935526	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	Q940617	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	CADMIUM	0.010		0.0123	mg/L	123	
ICS-A	Q940558	PERKIN ELM	CADMIUM	1.00		0.890	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	CALCIUM	100		98.2	mg/L	98	
DUP02	Q935524	A313423	CALCIUM	28.9		29.2	mg/L		1
SPI02	Q935522	A313423	CALCIUM	28.9	100	121	mg/L	92	
ICS-A	Q940564	PERKIN ELM	CALCIUM	500		476.	mg/L	95	
CCV	Q940622	INORGANIC	CALCIUM	50.0		50.9	mg/L	102	
BLA01	Q940621	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	CALCIUM	100		91.3	mg/L	91	
BLA02	Q935521	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q940617	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	CHROMIUM	0.400		0.421	mg/L	105	
DUP02	Q935524	A313423	CHROMIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q940565	INORGANIC	CHROMIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	Q940622	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	Q940621	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	CHROMIUM	2.00		1.89	mg/L	95	
BLA02	Q935521	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	Q940617	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	CHROMIUM	0.020		0.0261	mg/L	131	
ICS-A	Q940558	PERKIN ELM	CHROMIUM	0.500		0.478	mg/L	96	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	COBALT	0.400		0.419	mg/L	105
DUP02	Q935524	A313423	COBALT	0		BDL	mg/L	
SPI02	Q935522	A313423	COBALT	0	0.500	0.480	mg/L	96
CDL01	Q940565	INORGANIC	COBALT	10		9.97	mg/L	100
ICS-A	Q940564	PERKIN ELM	COBALT	0.500		0.474	mg/L	95
CCV	Q940622	INORGANIC	COBALT	5.00		5.05	mg/L	101
BLA01	Q940621	NA	COBALT			< 0.004	mg/L	
LCS	Q935520	SPEX	COBALT	5.00		4.59	mg/L	92
BLA02	Q935521	NA	COBALT			< 0.004	mg/L	
SAMPLE	A313421		See Certificate of Analysis					
CCV	Q940618	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	Q940617	NA	COBALT			< 0.004	mg/L	
CDL01	Q940556	PERKIN ELM	COBALT	0.100		0.114	mg/L	114
ICS-A	Q940558	PERKIN ELM	COBALT	0.500		0.460	mg/L	92

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	COPPER	0		BDL	mg/L		
SPI02	Q935522	A313423	COPPER	0	0.250	0.245	mg/L	98	
CDL01	Q944473	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q944472	PERKIN ELM	COPPER	0.500		0.513	mg/L	103	
CCV	Q944451	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944450	NA	COPPER			< 0.008	mg/L		
LCS	Q935520	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q935521	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q944441	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944440	NA	COPPER			< 0.008	mg/L		

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	IRON	1.1		1.04	mg/L		6
SPI02	Q935522	A313423	IRON	1.1	1	1.95	mg/L	85	
CDL01	Q940565	INORGANIC	IRON	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	IRON	200		189.	mg/L	95	
CCV	Q940622	INORGANIC	IRON	5.00		5.44	mg/L	109	
BLA01	Q940621	NA	IRON			< 0.01	mg/L		
LCS	Q935520	SPEX	IRON	10.0		9.67	mg/L	97	
BLA02	Q935521	NA	IRON			< 0.01	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	IRON	5.00		5.47	mg/L	109	
BLA01	Q940617	NA	IRON			< 0.01	mg/L		
ICS-A	Q940558	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	MAGNESIUM	100		99.8	mg/L	100	
DUP02	Q935524	A313423	MAGNESIUM	14.9		15.1	mg/L		1
SPI02	Q935522	A313423	MAGNESIUM	14.9	100	108	mg/L	93	
ICS-A	Q940564	PERKIN ELM	MAGNESIUM	500		492.	mg/L	98	
CCV	Q940622	INORGANIC	MAGNESIUM	50.0		50.2	mg/L	100	
BLA01	Q940621	NA	MAGNESIUM			.256	mg/L		
LCS	Q935520	SPEX	MAGNESIUM	100		90.7	mg/L	91	
BLA02	Q935521	NA	MAGNESIUM			.224	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q940617	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	MAGNESIUM	500		494.	mg/L	99	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	MANGANESE	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	MANGANESE	.0566		.0566	mg/L		0
SPI02	Q935522	A313423	MANGANESE	.0566	.5	.535	mg/L	96	
CDL01	Q940565	INORGANIC	MANGANESE	10		9.99	mg/L	100	
ICS-A	Q940564	PERKIN ELM	MANGANESE	0.500		0.509	mg/L	102	
CCV	Q940622	INORGANIC	MANGANESE	5.00		5.02	mg/L	100	
BLA01	Q940621	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935520	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	MANGANESE	0.030		0.0369	mg/L	123	
ICS-A	Q940558	PERKIN ELM	MANGANESE	0.500		0.492	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	NICKEL	0.400		0.410	mg/L	103	
DUP02	Q935524	A313423	NICKEL	.0156		BDL	mg/L		44
SPI02	Q935522	A313423	NICKEL	.0156	.5	.466	mg/L	90	
CDL01	Q944473	INORGANIC	NICKEL	10		10.1	mg/L	101	
ICS-A	Q944472	PERKIN ELM	NICKEL	1.00		0.871	mg/L	87	
CCV	Q944451	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944450	NA	NICKEL			< 0.004	mg/L		
LCS	Q935520	SPEX	NICKEL	5.00		4.46	mg/L	89	
BLA02	Q935521	NA	NICKEL			.01	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q944441	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944440	NA	NICKEL			< 0.004	mg/L		
CDL01	Q944417	PERKIN ELM	NICKEL	0.080		0.114	mg/L	143	
ICS-A	Q944416	PERKIN ELM	NICKEL	1.00		0.943	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q940674	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	Q940568	SPEX	POTASSIUM	100		103.	mg/L	103	
ICV01	Q940579	PERKIN ELM	POTASSIUM	20.0		19.2	mg/L	96	
DUP02	Q935524	A313423	POTASSIUM	2.05		1.93	mg/L		6
SPI02	Q935522	A313423	POTASSIUM	2.05	100	95.3	mg/L	93	
CCV	Q940622	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940621	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	POTASSIUM	100		90.1	mg/L	90	
BLA02	Q935521	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q940617	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	SILVER	2.00		2.04	mg/L	102	
DUP02	Q942774	A313423	SILVER	0		BDL	mg/L		
SPI02	Q942772	A313423	SILVER	0	0.050	0.0501	mg/L	100	
CDL01	Q944741	INORGANIC	SILVER	2		2.03	mg/L	102	
ICS-A	Q944740	PERKIN ELM	SILVER	1.00		0.992	mg/L	99	
CCV	Q944737	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	Q944736	NA	SILVER			< 0.004	mg/L		
LCS	Q942770	SPEX	SILVER	0.500		0.466	mg/L	93	
BLA02	Q942771	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q944723	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q944720	NA	SILVER			< 0.004	mg/L		
CDL01	Q944756	PERKIN ELM	SILVER	0.020		0.0254	mg/L	127	
ICS-A	Q944755	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	SODIUM	2		2.04	mg/L	102	
ICV01	Q940568	SPEX	SODIUM	100		102.	mg/L	102	
ICV01	Q940579	PERKIN ELM	SODIUM	2		1.88	mg/L	94	
DUP02	Q935524	A313423	SODIUM	4.47		4.56	mg/L		2
SPI02	Q935522	A313423	SODIUM	4.47	100	97.5	mg/L	93	
CCV	Q940622	INORGANIC	SODIUM	50.0		49.2	mg/L	98	
BLA01	Q940621	NA	SODIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	SODIUM	100		90.9	mg/L	91	
BLA02	Q935521	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	SODIUM	50.0		49.0	mg/L	98	
BLA01	Q940617	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	VANADIUM	0.400		0.409	mg/L	102	
DUP02	Q935524	A313423	VANADIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	VANADIUM	0	0.500	0.483	mg/L	97	
CDL01	Q940565	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q940564	PERKIN ELM	VANADIUM	0.500		0.483	mg/L	97	
CCV	Q940622	INORGANIC	VANADIUM	5.00		5.05	mg/L	101	
BLA01	Q940621	NA	VANADIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	VANADIUM	5.00		4.60	mg/L	92	
BLA02	Q935521	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	VANADIUM	5.00		5.03	mg/L	101	
BLA01	Q940617	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	VANADIUM	0.100		0.110	mg/L	110	
ICS-A	Q940558	PERKIN ELM	VANADIUM	0.500		0.476	mg/L	95	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	ZINC	0.400		0.409	mg/L	102	
DUP02	Q935524	A313423	ZINC	0		BDL	mg/L		
SPI02	Q935522	A313423	ZINC	0	0.500	0.498	mg/L	100	
CDL01	Q940565	INORGANIC	ZINC	10		9.93	mg/L	99	
ICS-A	Q940564	PERKIN ELM	ZINC	1.00		1.03	mg/L	103	
CCV	Q940622	INORGANIC	ZINC	5.00		5.11	mg/L	102	
BLA01	Q940621	NA	ZINC			< 0.008	mg/L		
LCS	Q935520	SPEX	ZINC	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	ZINC			.0231	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q940618	INORGANIC	ZINC	5.00		5.08	mg/L	102	
BLA01	Q940617	NA	ZINC			< 0.008	mg/L		
ICS-A	Q940558	PERKIN ELM	ZINC	1.00		1.00	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	ARSENIC	.04		0.0398	mg/L	100	
DUP02	Q935524	A313423	ARSENIC	0		BDL	mg/L		
SPI02	Q935522	A313423	ARSENIC	0	2	2.05	mg/L	103	
CDL01	Q947033	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	Q947032	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947031	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935525	INORGANIC	ARSENIC	.5		0.483	mg/L	97	
BLA02	Q935526	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q947028	INORGANIC	ARSENIC	.1		0.105	mg/L	105	
BLA01	Q947027	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947025	PERKIN-ELM	ARSENIC	.02		0.0225	mg/L	113	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q947037	PERKIN-ELM	LEAD	.04		0.0406	mg/L	102
DUP02	Q935524	A313423	LEAD	0		BDL	mg/L	
SPI02	Q935522	A313423	LEAD	0	0.500	0.477	mg/L	95
ICS-A	Q947040	PERKIN ELM	LEAD	1		0.954	mg/L	95
CDL01	Q947033	INORGANIC	LEAD	.5		0.501	mg/L	100
CCV	Q947032	INORGANIC	LEAD	.1		0.102	mg/L	102
BLA01	Q947031	NA	LEAD			< 0.002	mg/L	
LCS	Q935525	INORGANIC	LEAD	.5		0.492	mg/L	98
BLA02	Q935526	NA	LEAD			< 0.002	mg/L	
SAMPLE	A313421		See Certificate of Analysis					
CCV	Q947028	INORGANIC	LEAD	.1		0.103	mg/L	103
BLA01	Q947027	NA	LEAD			< 0.002	mg/L	
CDL01	Q947025	PERKIN-ELM	LEAD	.006		0.00571	mg/L	95
ICS-A	Q947024	PERKIN ELM	LEAD	1		0.959	mg/L	96

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	SELENIUM	.04		0.0402	mg/L	101	
DUP02	Q935524	A313423	SELENIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	SELENIUM	0	2	2.02	mg/L	101	
CDL01	Q947033	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q947032	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947031	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935525	INORGANIC	SELENIUM	.5		0.478	mg/L	96	
BLA02	Q935526	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q947028	INORGANIC	SELENIUM	.1		0.105	mg/L	105	
BLA01	Q947027	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947025	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947037	PERKIN-ELM	THALLIUM	.04		0.0399	mg/L	100	
DUP02	Q935524	A313423	THALLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	THALLIUM	0	3.00	2.57	mg/L	86	
CDL01	Q947033	INORGANIC	THALLIUM	.5		0.502	mg/L	100	
CCV	Q947032	INORGANIC	THALLIUM	.1		0.101	mg/L	101	
BLA01	Q947031	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935525	INORGANIC	THALLIUM	.5		0.487	mg/L	97	
BLA02	Q935526	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
CCV	Q947028	INORGANIC	THALLIUM	.1		0.0987	mg/L	99	
BLA01	Q947027	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947025	PERKIN-ELM	THALLIUM	.02		.0253	mg/L	127	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 14-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: S. O'NEAL Review Date: 16-JUN-94 File ID: 000695 Run: R220343

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943995		MERCURY	.00147		.00156	mg/L	106.1	
DUP02	0939762	A313419	MERCURY	0		BDL	mg/L		
SPI02	0939760	A313419	MERCURY	0	.001	.000936	mg/L	93.6	
CDL01	0943999		MERCURY	.0002		.000214	mg/L	107	
CCV	0944022		MERCURY	.003		.0026	mg/L	86.7	
BLA01	0944023		MERCURY			< .00008	mg/L		
LCS	0939758		MERCURY	.003		.00272	mg/L	90.7	
BLA02	0939759		MERCURY			< .00008	mg/L		
SAMPLE	A313421		See Certificate of Analysis						
BLA01	0944024		MERCURY			< .00008	mg/L		
CCV	0944025		MERCURY	.003		.00282	mg/L	94	
CDL01	0944026		MERCURY	.0002		.000183	mg/L	91.5	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >6149J Run: R220046

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0946126	A313421	BENZENE	0	10	9.74	ug/L	97.4	
SPI01	0946126	A313421	CARBON TETRACHLORIDE	0	10	8.77	ug/L	87.7	
SPI01	0946126	A313421	1,2-DICHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	1,1-DICHLOROETHENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	1,1,1-TRICHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	TRICHLOROETHENE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	VINYL CHLORIDE	0	10	9.35	ug/L	93.5	
SPI01	0946126	A313421	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	BROMOFORM	0	10	9.51	ug/L	95.1	
SPI01	0946126	A313421	BROMOMETHANE	0	10	9.66	ug/L	96.6	
SPI01	0946126	A313421	CHLOROBENZENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	DIBROMOCHLOROMETHANE	0	10	9.44	ug/L	94.4	
SPI01	0946126	A313421	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	CHLOROFORM	0	10	10.7	ug/L	107	
SPI01	0946126	A313421	CHLOROMETHANE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	TRANS-1,2-DICHLOROETHENE	0	10	9.68	ug/L	96.8	
SPI01	0946126	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	0946126	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.3	ug/L	103	
SPI01	0946126	A313421	1,1-DICHLOROETHANE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	1,2-DICHLOROPROPANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	11	ug/L	110	
SPI01	0946126	A313421	ETHYL BENZENE	0	10	9.24	ug/L	92.4	
SPI01	0946126	A313421	STYRENE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	1,1,2-TRICHLOROETHANE	0	10	11.3	ug/L	113	
SPI01	0946126	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	TETRACHLOROETHENE	0	10	9.05	ug/L	90.5	
SPI01	0946126	A313421	TOLUENE	0	10	10.5	ug/L	105	
SPI01	0946126	A313421	ACETONE	7.5	10	19.9	ug/L	124	
SPI01	0946126	A313421	CARBON DISULFIDE	0	10	9.25	ug/L	92.5	
SPI01	0946126	A313421	4-METHYL-2-PENTANONE	0	10	8.98	ug/L	89.8	
SPI01	0946126	A313421	2-HEXANONE	0	10	10.9	ug/L	109	
DPS01	0946127	A313421	BENZENE	0	10	9.93	ug/L	99.3	1.9
DPS01	0946127	A313421	CARBON TETRACHLORIDE	0	10	9.36	ug/L	93.6	6.5
DPS01	0946127	A313421	1,2-DICHLOROETHANE	0	10	10.1	ug/L	101	6.7
DPS01	0946127	A313421	1,1-DICHLOROETHENE	0	10	10.5	ug/L	105	8.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q946127	A313421	1,1,1-TRICHLOROETHANE	0	10	10.1	ug/L	101	3.1
DPS01	Q946127	A313421	TRICHLOROETHENE	0	10	10.9	ug/L	109	6.6
DPS01	Q946127	A313421	VINYL CHLORIDE	0	10	10.2	ug/L	102	
DPS01	Q946127	A313421	BROMODICHLOROMETHANE	0	10	10.3	ug/L	103	
DPS01	Q946127	A313421	BROMOFORM	0	10	9.42	ug/L	94.2	1
DPS01	Q946127	A313421	BROMOMETHANE	0	10	10.1	ug/L	101	4.5
DPS01	Q946127	A313421	CHLOROBENZENE	0	10	10.1	ug/L	101	4.7
DPS01	Q946127	A313421	DIBROMOCHLOROMETHANE	0	10	9.3	ug/L	93	1.5
DPS01	Q946127	A313421	CHLOROETHANE	0	10	10.5	ug/L	105	7
DPS01	Q946127	A313421	CHLOROFORM	0	10	10.4	ug/L	104	2.8
DPS01	Q946127	A313421	CHLOROMETHANE	0	10	10.1	ug/L	101	6.9
DPS01	Q946127	A313421	TRANS-1,2-DICHLOROETHENE	0	10	10.4	ug/L	104	7.2
DPS01	Q946127	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	0
DPS01	Q946127	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.2	ug/L	102	1
DPS01	Q946127	A313421	1,1-DICHLOROETHANE	0	10	10.4	ug/L	104	1.9
DPS01	Q946127	A313421	1,2-DICHLOROPROPANE	0	10	10.5	ug/L	105	.9
DPS01	Q946127	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.3	ug/L	103	2.9
DPS01	Q946127	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	5.6
DPS01	Q946127	A313421	ETHYL BENZENE	0	10	9.99	ug/L	99.9	7.8
DPS01	Q946127	A313421	STYRENE	0	10	9.65	ug/L	96.5	2.3
DPS01	Q946127	A313421	1,1,2-TRICHLOROETHANE	0	10	10.5	ug/L	105	7.3
DPS01	Q946127	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	0
DPS01	Q946127	A313421	TETRACHLOROETHENE	0	10	10	ug/L	100	10
DPS01	Q946127	A313421	TOLUENE	0	10	10.7	ug/L	107	1.9
DPS01	Q946127	A313421	ACETONE	7.5	10	16.3	ug/L	88	34
DPS01	Q946127	A313421	CARBON DISULFIDE	0	10	9.74	ug/L	97.4	5.2
DPS01	Q946127	A313421	4-METHYL-2-PENTANONE	0	10	8.28	ug/L	82.8	8.1
DPS01	Q946127	A313421	2-HEXANONE	0	10	10.5	ug/L	105	7
CCV	Q941730		See Attached Report g6141j.ind						
BLA01	Q941731		See Attached Report g6142j.ind						
SAMPLE	A313421		See Certificate of Analysis						

Comments

Q946126 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q946127 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 20-JUN-94 Instrument: GC/MS SVOA Test: Q505.3.0
Reviewer: A. BRADBURN Review Date: 22-JUN-94 File ID: >6797F Run: R221127

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q938222	A313337	PHENOL	0	200	81	ug/L	40.5	
SP102	Q938222	A313337	2-CHLOROPHENOL	0	200	157	ug/L	78.5	
SP102	Q938222	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	149	ug/L	74.5	
SP102	Q938222	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	166	ug/L	83	
SP102	Q938222	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	
SP102	Q938222	A313337	4-CHLORO-3-METHYLPHENOL	0	200	166	ug/L	83	
SP102	Q938222	A313337	ACENAPHTHENE	0	200	164	ug/L	82	
SP102	Q938222	A313337	4-NITROPHENOL	0	200	82.8	ug/L	41.4	
SP102	Q938222	A313337	2,4-DINITROTOLUENE	0	200	179	ug/L	89.5	
SP102	Q938222	A313337	PENTACHLOROPHENOL	0	200	181	ug/L	90.5	
SP102	Q938222	A313337	PYRENE	0	200	179	ug/L	89.5	
DPS02	Q938223	A313337	PHENOL	0	200	73.5	ug/L	36.8	9.6
DPS02	Q938223	A313337	2-CHLOROPHENOL	0	200	154	ug/L	77	1.9
DPS02	Q938223	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	146	ug/L	73	
DPS02	Q938223	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	163	ug/L	81.5	1.8
DPS02	Q938223	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	0
DPS02	Q938223	A313337	4-CHLORO-3-METHYLPHENOL	0	200	157	ug/L	78.5	5.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0938223	A313337	ACENAPHTHENE	0	200	159	ug/L	79.5	3.1
DPS02	0938223	A313337	4-NITROPHENOL	0	200	70.7	ug/L	35.4	15.6
DPS02	0938223	A313337	2,4-DINITROTOLUENE	0	200	171	ug/L	85.5	4.6
DPS02	0938223	A313337	PENTACHLOROPHENOL	0	200	175	ug/L	87.5	3.4
DPS02	0938223	A313337	PYRENE	0	200	181	ug/L	90.5	1.1
CCV	0949061		See Attached Report g6795f.ind						
BLA02	0944900		See Attached Report g7682h.ind						
SAMPLE	A313421		See Certificate of Analysis						
LCS	0938221	HLI	ACENAPHTHENE	100		83.5	ug/L	83.5	
LCS	0938221	HLI	ACENAPHTHYLENE	100		71.9	ug/L	71.9	
LCS	0938221	HLI	ANTHRACENE	100		77.4	ug/L	77.4	
LCS	0938221	HLI	BENZO(A)PYRENE	100		77.7	ug/L	77.7	
LCS	0938221	HLI	BENZO(B)FLUORANTHENE	100		76.8	ug/L	76.8	
LCS	0938221	HLI	BENZO(G,H,I)PERYLENE	100		84.2	ug/L	84.2	
LCS	0938221	HLI	BENZO(K)FLUORANTHENE	100		76.5	ug/L	76.5	
LCS	0938221	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	100		84.5	ug/L	84.5	
LCS	0938221	HLI	BIS(2-CHLOROETHOXY)METHANE	100		80.9	ug/L	80.9	
LCS	0938221	HLI	BIS(2-CHLOROETHYL)ETHER	100		71.5	ug/L	71.5	
LCS	0938221	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100		71.4	ug/L	71.4	
LCS	0938221	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100		86.6	ug/L	86.6	
LCS	0938221	HLI	4-BROMODIPHENYL ETHER	100		79.2	ug/L	79.2	
LCS	0938221	HLI	CARBAZOLE	100		85	ug/L	85	
LCS	0938221	HLI	4-CHLOROANILINE	100		83.8	ug/L	83.8	
LCS	0938221	HLI	2-CHLORONAPHTHALENE	100		99.1	ug/L	99.1	
LCS	0938221	HLI	4-CHLOROPHENYL-PHENYLETHER	100		81.8	ug/L	81.8	
LCS	0938221	HLI	CHRYSENE	100		83.8	ug/L	83.8	
LCS	0938221	HLI	DIBENZ(A,H)ANTHRACENE	100		98.4	ug/L	98.4	
LCS	0938221	HLI	DIBENZOFURAN	100		81.2	ug/L	81.2	
LCS	0938221	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	100		64.6	ug/L	64.6	
LCS	0938221	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	100		64.8	ug/L	64.8	
LCS	0938221	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	100		64.4	ug/L	64.4	
LCS	0938221	HLI	3,3'-DICHLOROBENZIDINE	100		106	ug/L	106	
LCS	0938221	HLI	DIETHYLPHTHALATE	100		69.8	ug/L	69.8	
LCS	0938221	HLI	DIMETHYLPHTHALATE	100		47.5	ug/L	47.5	
LCS	0938221	HLI	DI-N-BUTYLPHTHALATE	100		75.7	ug/L	75.7	
LCS	0938221	HLI	2,4-DINITROTOLUENE	100		85.5	ug/L	85.5	
LCS	0938221	HLI	2,6-DINITROTOLUENE	100		84.9	ug/L	84.9	
LCS	0938221	HLI	DI-N-OCTYLPHTHALATE	100		71.6	ug/L	71.6	
LCS	0938221	HLI	FLUORANTHENE	100		79.8	ug/L	79.8	
LCS	0938221	HLI	FLUORENE	100		82.3	ug/L	82.3	
LCS	0938221	HLI	HEXACHLOROBENZENE	100		79.3	ug/L	79.3	
LCS	0938221	HLI	HEXACHLOROBUTADIENE	100		71.4	ug/L	71.4	
LCS	0938221	HLI	HEXACHLOROCYCLOPENTADIENE	100		111	ug/L	111	
LCS	0938221	HLI	HEXACHLOROETHANE	100		65.5	ug/L	65.5	
LCS	0938221	HLI	INDENO(1,2,3-CD)PYRENE	100		83.3	ug/L	83.3	
LCS	0938221	HLI	ISOPHORONE	100		83.6	ug/L	83.6	
LCS	0938221	HLI	2-METHYLNAPHTHALENE	100		78.5	ug/L	78.5	
LCS	0938221	HLI	NAPHTHALENE	100		75.2	ug/L	75.2	
LCS	0938221	HLI	2-NITROANILINE (O-NITROANILINE)	100		87.6	ug/L	87.6	
LCS	0938221	HLI	3-NITROANILINE (M-NITROANILINE)	100		90.1	ug/L	90.1	
LCS	0938221	HLI	4-NITROANILINE (P-NITROANILINE)	100		92.4	ug/L	92.4	
LCS	0938221	HLI	NITROBENZENE	100		82.5	ug/L	82.5	
LCS	0938221	HLI	N-NITROSODIPHENYLAMINE	100		158	ug/L	158	
LCS	0938221	HLI	N-NITROSO-DI-N-PROPYLAMINE	100		80.3	ug/L	80.3	
LCS	0938221	HLI	PHENANTHRENE	100		79.9	ug/L	79.9	
LCS	0938221	HLI	PYRENE	100		86.8	ug/L	86.8	
LCS	0938221	HLI	1,2,4-TRICHLOROBENZENE	100		75.7	ug/L	75.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0938221	HLI	2-CHLOROPHENOL	100		75.8	ug/L	75.8	
LCS	0938221	HLI	2,4-DICHLOROPHENOL	100		79.9	ug/L	79.9	
LCS	0938221	HLI	2,4-DIMETHYLPHENOL	100		53.3	ug/L	53.3	
LCS	0938221	HLI	2,4-DINITROPHENOL	100		98.9	ug/L	98.9	
LCS	0938221	HLI	2-METHYLPHENOL (O-CRESOL)	100		70.1	ug/L	70.1	
LCS	0938221	HLI	4-METHYLPHENOL (P-CRESOL)	100		63.6	ug/L	63.6	
LCS	0938221	HLI	2-NITROPHENOL	100		85	ug/L	85	
LCS	0938221	HLI	4-NITROPHENOL	100		40.1	ug/L	40.1	
LCS	0938221	HLI	PENTACHLOROPHENOL	100		85.1	ug/L	85.1	
LCS	0938221	HLI	PHENOL	100		39.8	ug/L	39.8	
LCS	0938221	HLI	2,4,5-TRICHLOROPHENOL	100		78.4	ug/L	78.4	
LCS	0938221	HLI	2,4,6-TRICHLOROPHENOL	100		81.6	ug/L	81.6	

Comments

Q938222 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q938223 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0939796	A313421	GAMMA-BHC (LINDANE)	0	.00048	.000469	mg/L	97.7	6.3
DPS02	0939796	A313421	HEPTACHLOR	0	.00048	.00052	mg/L	108.3	1.9
DPS02	0939796	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	0
DPS02	0939796	A313421	DIELDRIN	0	.001	.00118	mg/L	118	4.3
DPS02	0939796	A313421	ENDRIN	0	.001	.00128	mg/L	128	9
DPS02	0939796	A313421	4,4'-DDT	0	.001	.00094	mg/L	94	7.2
SP102	0939775	A313421	GAMMA-BHC (LINDANE)	0	.00048	.00044	mg/L	91.7	
SP102	0939775	A313421	HEPTACHLOR	0	.00048	.00051	mg/L	106.3	
SP102	0939775	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	
SP102	0939775	A313421	DIELDRIN	0	.001	.00113	mg/L	113	
SP102	0939775	A313421	ENDRIN	0	.001	.00117	mg/L	117	
SP102	0939775	A313421	4,4'-DDT	0	.001	.00101	mg/L	101	
BLA02	0939793		ALPHA-BHC			< .00002	mg/L		
BLA02	0939793		BETA-BHC			< .00002	mg/L		
BLA02	0939793		DELTA-BHC			< .00002	mg/L		
BLA02	0939793		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0939793		HEPTACHLOR			< .00002	mg/L		
BLA02	0939793		ALDRIN			< .00002	mg/L		
BLA02	0939793		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0939793		ENDOSULFAN I			< .00002	mg/L		
BLA02	0939793		DIELDRIN			< .00004	mg/L		
BLA02	0939793		4,4'-DDE			< .00004	mg/L		
BLA02	0939793		ENDRIN			< .00004	mg/L		
BLA02	0939793		ENDOSULFAN II			< .00004	mg/L		
BLA02	0939793		4,4'-DDD			< .00004	mg/L		
BLA02	0939793		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0939793		4,4'-DDT			< .00004	mg/L		
BLA02	0939793		METHOXYCHLOR			< .0002	mg/L		
BLA02	0939793		ENDRIN KETONE			< .00004	mg/L		
BLA02	0939793		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0939793		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0939793		TOXAPHENE			< .0004	mg/L		
BLA02	0939793		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1242			< .0002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q939793		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q939794		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	Q939794		HEPTACHLOR	.0005		.00051	mg/L	102	
LCS	Q939794		ALDRIN	.0005		.00052	mg/L	104	
LCS	Q939794		DIELDRIN	.001		.0012	mg/L	120	
LCS	Q939794		ENDRIN	.001		.0012	mg/L	120	
LCS	Q939794		4,4'-DDT	.001		.00099	mg/L	99	
SAMPLE	A313421		See Certificate of Analysis						

Notes

<	*Less Than Lower Detection Limit*
BDL	*Below Detection Limit*

Quality Assurance Officer: N. Kemmerle

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313422
	Complete	PO Number
	01-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	04-JUN-94 14:15

Sample Description

SAMPLE ID: SW-060494-WP-035
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : C. BOYLE — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
SPI02	0941046	A313422	CYANIDE	0	.1	.086	mg/L	86	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941044		CYANIDE	.1		.095	mg/L	95	
BLA01	0941045		CYANIDE			-.0003	mg/L		
BLA02	0940937		CYANIDE			.005	mg/L		
LFB02	0940962		CYANIDE	.3		.247	mg/L	82.3	
SAMPLE	A313422		See Certificate of Analysis						
CCV	0941060		CYANIDE	.1		.096	mg/L	96	
BLA01	0941061		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : N. JAO — Analysis Date: 10-JUN-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 13-JUN-94 — File ID: — Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940674	PERKIN ELM	ALUMINUM	2.00		2.03	mg/L	102	
ICV01	0940579	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP02	0935524	A313423	ALUMINUM	.536		.492	mg/L		9
SPI02	0935522	A313423	ALUMINUM	.536	2	2.44	mg/L	95	
CDL01	0940565	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	0940564	PERKIN ELM	ALUMINUM	500		516.	mg/L	103	
CCV	0940618	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	0940617	NA	ALUMINUM			< 0.02	mg/L		
LCS	0935520	SPEX	ALUMINUM	20.0		18.3	mg/L	92	
BLA02	0935521	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	ALUMINUM	5.00		5.03	mg/L	101	
BLA01	0940610	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0940558	PERKIN ELM	ALUMINUM	500		502.	mg/L	100	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0940673	PERKIN ELM	ANTIMONY	0.400		0.394	mg/L	99
DUP02	0935524	A313423	ANTIMONY	0		BDL	mg/L	
SPI02	0935522	A313423	ANTIMONY	0	0.500	0.465	mg/L	93
CDL01	0940566	PERKIN ELM	ANTIMONY	0.120		0.130	mg/L	108
CCV	0940618	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	0940617	NA	ANTIMONY			< 0.012	mg/L	
LCS	0935520	SPEX	ANTIMONY	5.00		4.45	mg/L	89
BLA02	0935521	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A313422		See Certificate of Analysis					
CCV	0940609	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	0940610	NA	ANTIMONY			< 0.012	mg/L	
CDL01	0940556	PERKIN ELM	ANTIMONY	0.120		0.133	mg/L	111

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940674	PERKIN ELM	BARIUM	2.00		2.09	mg/L	105	
ICV01	0940579	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	0935524	A313423	BARIUM	.0192		.0192	mg/L		0
SPI02	0935522	A313423	BARIUM	.0192	2	1.97	mg/L	98	
CDL01	0940565	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	0940564	PERKIN ELM	BARIUM	0.500		0.519	mg/L	104	
CCV	0940618	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	0940617	NA	BARIUM			< 0.004	mg/L		
LCS	0935520	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	0935521	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	0940610	NA	BARIUM			< 0.004	mg/L		
ICS-A	0940558	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	BERYLLIUM	0.400		0.413	mg/L	103	
DUP02	0935524	A313423	BERYLLIUM	0		BDL	mg/L		
SPI02	0935522	A313423	BERYLLIUM	0	0.050	0.0517	mg/L	103	
CDL01	0940565	INORGANIC	BERYLLIUM	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	0940618	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	0940617	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0935520	SPEX	BERYLLIUM	0.500		0.476	mg/L	95	
BLA02	0935521	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	0940610	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0940556	PERKIN ELM	BERYLLIUM	0.010		0.0109	mg/L	109	
ICS-A	0940558	PERKIN ELM	BERYLLIUM	0.500		0.492	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	CADMIUM	0.400		0.418	mg/L	105	
DUP02	0935524	A313423	CADMIUM	0		BDL	mg/L		
SPI02	0935522	A313423	CADMIUM	0	0.050	0.0428	mg/L	86	
CDL01	0940565	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	CADMIUM	1.00		0.922	mg/L	92	
CCV	0940618	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	0940617	NA	CADMIUM			< 0.002	mg/L		
LCS	0935525	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	0935526	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	CADMIUM	5.00		5.03	mg/L	101	
BLA01	0940610	NA	CADMIUM			< 0.002	mg/L		
CDL01	0940556	PERKIN ELM	CADMIUM	0.010		0.0123	mg/L	123	
ICS-A	0940558	PERKIN ELM	CADMIUM	1.00		0.890	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940568	SPEX	CALCIUM	100		98.2	mg/L	98	
DUP02	0935524	A313423	CALCIUM	28.9		29.2	mg/L		1
SPI02	0935522	A313423	CALCIUM	28.9	100	121	mg/L	92	
ICS-A	0940564	PERKIN ELM	CALCIUM	500		476.	mg/L	95	
CCV	0940618	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	0940617	NA	CALCIUM			< 0.08	mg/L		
LCS	0935520	SPEX	CALCIUM	100		91.3	mg/L	91	
BLA02	0935521	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	CALCIUM	50.0		50.1	mg/L	100	
BLA01	0940610	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0940558	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	CHROMIUM	0.400		0.421	mg/L	105	
DUP02	0935524	A313423	CHROMIUM	0		BDL	mg/L		
SPI02	0935522	A313423	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	0940565	INORGANIC	CHROMIUM	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	0940618	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	0940617	NA	CHROMIUM			< 0.004	mg/L		
LCS	0935520	SPEX	CHROMIUM	2.00		1.89	mg/L	95	
BLA02	0935521	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	0940610	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0940556	PERKIN ELM	CHROMIUM	0.020		0.0261	mg/L	131	
ICS-A	0940558	PERKIN ELM	CHROMIUM	0.500		0.478	mg/L	96	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	COBALT	0.400		0.419	mg/L	105
DUP02	Q935524	A313423	COBALT	0		BDL	mg/L	
SPI02	Q935522	A313423	COBALT	0	0.500	0.480	mg/L	96
CDL01	Q940565	INORGANIC	COBALT	10		9.97	mg/L	100
ICS-A	Q940564	PERKIN ELM	COBALT	0.500		0.474	mg/L	95
CCV	Q940618	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	Q940617	NA	COBALT			< 0.004	mg/L	
LCS	Q935520	SPEX	COBALT	5.00		4.59	mg/L	92
BLA02	Q935521	NA	COBALT			< 0.004	mg/L	
SAMPLE	A313422		See Certificate of Analysis					
CCV	Q940609	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	Q940610	NA	COBALT			< 0.004	mg/L	
CDL01	Q940556	PERKIN ELM	COBALT	0.100		0.114	mg/L	114
ICS-A	Q940558	PERKIN ELM	COBALT	0.500		0.460	mg/L	92

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	COPPER	0		BDL	mg/L		
SPI02	Q935522	A313423	COPPER	0	0.250	0.245	mg/L	98	
CDL01	Q944473	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q944472	PERKIN ELM	COPPER	0.500		0.513	mg/L	103	
CCV	Q944451	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944450	NA	COPPER			< 0.008	mg/L		
LCS	Q935520	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q935521	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	Q944441	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	Q944440	NA	COPPER			< 0.008	mg/L		

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q935524	A313423	IRON	1.1		1.04	mg/L		6
SPI02	Q935522	A313423	IRON	1.1	1	1.95	mg/L	85	
CDL01	Q940565	INORGANIC	IRON	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	IRON	200		189.	mg/L	95	
CCV	Q940618	INORGANIC	IRON	5.00		5.47	mg/L	109	
BLA01	Q940617	NA	IRON			< 0.01	mg/L		
LCS	Q935520	SPEX	IRON	10.0		9.67	mg/L	97	
BLA02	Q935521	NA	IRON			< 0.01	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	Q940609	INORGANIC	IRON	5.00		5.40	mg/L	108	
BLA01	Q940610	NA	IRON			< 0.01	mg/L		
ICS-A	Q940558	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	MAGNESIUM	100		99.8	mg/L	100	
DUP02	Q935524	A313423	MAGNESIUM	14.9		15.1	mg/L		1
SPI02	Q935522	A313423	MAGNESIUM	14.9	100	108	mg/L	93	
ICS-A	Q940564	PERKIN ELM	MAGNESIUM	500		492.	mg/L	98	
CCV	Q940618	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q940617	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	MAGNESIUM	100		90.7	mg/L	91	
BLA02	Q935521	NA	MAGNESIUM			.224	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	Q940609	INORGANIC	MAGNESIUM	50.0		50.3	mg/L	101	
BLA01	Q940610	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	MAGNESIUM	500		494.	mg/L	99	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	MANGANESE	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	MANGANESE	.0566		.0566	mg/L		0
SPI02	Q935522	A313423	MANGANESE	.0566	.5	.535	mg/L	96	
CDL01	Q940565	INORGANIC	MANGANESE	10		9.99	mg/L	100	
ICS-A	Q940564	PERKIN ELM	MANGANESE	0.500		0.509	mg/L	102	
CCV	Q940618	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935520	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	Q940609	INORGANIC	MANGANESE	5.00		4.98	mg/L	100	
BLA01	Q940610	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	MANGANESE	0.030		0.0369	mg/L	123	
ICS-A	Q940558	PERKIN ELM	MANGANESE	0.500		0.492	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	NICKEL	0.400		0.410	mg/L	103	
DUP02	Q935524	A313423	NICKEL	.0156		BDL	mg/L		44
SPI02	Q935522	A313423	NICKEL	.0156	.5	.466	mg/L	90	
CDL01	Q944473	INORGANIC	NICKEL	10		10.1	mg/L	101	
ICS-A	Q944472	PERKIN ELM	NICKEL	1.00		0.871	mg/L	87	
CCV	Q944451	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944450	NA	NICKEL			< 0.004	mg/L		
LCS	Q935520	SPEX	NICKEL	5.00		4.46	mg/L	89	
BLA02	Q935521	NA	NICKEL			.01	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	Q944441	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944440	NA	NICKEL			< 0.004	mg/L		
CDL01	Q944417	PERKIN ELM	NICKEL	0.080		0.114	mg/L	143	
ICS-A	Q944416	PERKIN ELM	NICKEL	1.00		0.943	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0940674	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0940568	SPEX	POTASSIUM	100		103.	mg/L	103	
ICV01	0940579	PERKIN ELM	POTASSIUM	20.0		19.2	mg/L	96	
DUP02	0935524	A313423	POTASSIUM	2.05		1.93	mg/L		6
SP102	0935522	A313423	POTASSIUM	2.05	100	95.3	mg/L	93	
CCV	0940618	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	0940617	NA	POTASSIUM			< 0.08	mg/L		
LCS	0935520	SPEX	POTASSIUM	100		90.1	mg/L	90	
BLA02	0935521	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	POTASSIUM	50.0		48.9	mg/L	98	
BLA01	0940610	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0944745	PERKIN ELM	SILVER	2.00		2.04	mg/L	102	
DUP02	0942774	A313423	SILVER	0		BDL	mg/L		
SP102	0942772	A313423	SILVER	0	0.050	0.0501	mg/L	100	
CDL01	0944741	INORGANIC	SILVER	2		2.03	mg/L	102	
ICS-A	0944740	PERKIN ELM	SILVER	1.00		0.992	mg/L	99	
CCV	0944737	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0944736	NA	SILVER			< 0.004	mg/L		
LCS	0942770	SPEX	SILVER	0.500		0.466	mg/L	93	
BLA02	0942771	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0944723	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	0944720	NA	SILVER			< 0.004	mg/L		
CDL01	0944756	PERKIN ELM	SILVER	0.020		0.0254	mg/L	127	
ICS-A	0944755	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940674	PERKIN ELM	SODIUM	2		2.04	mg/L	102	
ICV01	0940568	SPEX	SODIUM	100		102.	mg/L	102	
ICV01	0940579	PERKIN ELM	SODIUM	2		1.88	mg/L	94	
DUP02	0935524	A313423	SODIUM	4.47		4.56	mg/L		2
SP102	0935522	A313423	SODIUM	4.47	100	97.5	mg/L	93	
CCV	0940618	INORGANIC	SODIUM	50.0		49.0	mg/L	98	
BLA01	0940617	NA	SODIUM			< 0.08	mg/L		
LCS	0935520	SPEX	SODIUM	100		90.9	mg/L	91	
BLA02	0935521	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	SODIUM	50.0		48.8	mg/L	98	
BLA01	0940610	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	VANADIUM	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	VANADIUM	0		BDL	mg/L		
SPI02	0935522	A313423	VANADIUM	0	0.500	0.483	mg/L	97	
CDL01	0940565	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	0940564	PERKIN ELM	VANADIUM	0.500		0.483	mg/L	97	
CCV	0940618	INORGANIC	VANADIUM	5.00		5.03	mg/L	101	
BLA01	0940617	NA	VANADIUM			< 0.004	mg/L		
LCS	0935520	SPEX	VANADIUM	5.00		4.60	mg/L	92	
BLA02	0935521	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	VANADIUM	5.00		5.04	mg/L	101	
BLA01	0940610	NA	VANADIUM			< 0.004	mg/L		
CDL01	0940556	PERKIN ELM	VANADIUM	0.100		0.110	mg/L	110	
ICS-A	0940558	PERKIN ELM	VANADIUM	0.500		0.476	mg/L	95	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	ZINC	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	ZINC	0		BDL	mg/L		
SPI02	0935522	A313423	ZINC	0	0.500	0.498	mg/L	100	
CDL01	0940565	INORGANIC	ZINC	10		9.93	mg/L	99	
ICS-A	0940564	PERKIN ELM	ZINC	1.00		1.03	mg/L	103	
CCV	0940618	INORGANIC	ZINC	5.00		5.08	mg/L	102	
BLA01	0940617	NA	ZINC			< 0.008	mg/L		
LCS	0935520	SPEX	ZINC	5.00		4.57	mg/L	91	
BLA02	0935521	NA	ZINC			.0231	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0940609	INORGANIC	ZINC	5.00		5.09	mg/L	102	
BLA01	0940610	NA	ZINC			< 0.008	mg/L		
ICS-A	0940558	PERKIN ELM	ZINC	1.00		1.00	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	ARSENIC	.04		0.0398	mg/L	100	
DUP02	0935524	A313423	ARSENIC	0		BDL	mg/L		
SPI02	0935522	A313423	ARSENIC	0	2	2.05	mg/L	103	
CDL01	0947033	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	0947032	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	0947031	NA	ARSENIC			< 0.002	mg/L		
LCS	0935525	INORGANIC	ARSENIC	.5		0.483	mg/L	97	
BLA02	0935526	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0947028	INORGANIC	ARSENIC	.1		0.105	mg/L	105	
BLA01	0947027	NA	ARSENIC			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	ARSENIC	.02		0.0225	mg/L	113	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0947037	PERKIN-ELM	LEAD	.04		0.0406	mg/L	102
DUP02	0935524	A313423	LEAD	0		BDL	mg/L	
SPI02	0935522	A313423	LEAD	0	0.500	0.477	mg/L	95
ICS-A	0947040	PERKIN ELM	LEAD	1		0.954	mg/L	95
CDL01	0947033	INORGANIC	LEAD	.5		0.501	mg/L	100
CCV	0947032	INORGANIC	LEAD	.1		0.102	mg/L	102
BLA01	0947031	NA	LEAD			< 0.002	mg/L	
LCS	0935525	INORGANIC	LEAD	.5		0.492	mg/L	98
BLA02	0935526	NA	LEAD			< 0.002	mg/L	
SAMPLE	A313422		See Certificate of Analysis					
CCV	0947028	INORGANIC	LEAD	.1		0.103	mg/L	103
BLA01	0947027	NA	LEAD			< 0.002	mg/L	
CDL01	0947025	PERKIN-ELM	LEAD	.006		0.00571	mg/L	95
ICS-A	0947024	PERKIN ELM	LEAD	1		0.959	mg/L	96

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	SELENIUM	.04		0.0402	mg/L	101	
DUP02	0935524	A313423	SELENIUM	0		BDL	mg/L		
SPI02	0935522	A313423	SELENIUM	0	2	2.02	mg/L	101	
CDL01	0947033	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	0947[illegible]2	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	0947031	NA	SELENIUM			< 0.002	mg/L		
LCS	0935525	INORGANIC	SELENIUM	.5		0.478	mg/L	96	
BLA02	0935526	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0947028	INORGANIC	SELENIUM	.1		0.105	mg/L	105	
BLA01	0947027	NA	SELENIUM			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	THALLIUM	.04		0.0399	mg/L	100	
DUP02	0935524	A313423	THALLIUM	0		BDL	mg/L		
SPI02	0935522	A313423	THALLIUM	0	3.00	2.57	mg/L	86	
CDL01	0947033	INORGANIC	THALLIUM	.5		0.502	mg/L	100	
CCV	0947032	INORGANIC	THALLIUM	.1		0.101	mg/L	101	
BLA01	0947031	NA	THALLIUM			< 0.004	mg/L		
LCS	0935525	INORGANIC	THALLIUM	.5		0.487	mg/L	97	
BLA02	0935526	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
CCV	0947028	INORGANIC	THALLIUM	.1		0.0987	mg/L	99	
BLA01	0947027	NA	THALLIUM			< 0.004	mg/L		
CDL01	0947025	PERKIN-ELM	THALLIUM	.02		.0253	mg/L	127	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 14-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: S. O'NEAL Review Date: 16-JUN-94 File ID: 000695 Run: R220343

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943995		MERCURY	.00147		.00156	mg/L	106.1	
DUP02	0939762	A313419	MERCURY	0		BDL	mg/L		
SPI02	0939760	A313419	MERCURY	0	.001	.000936	mg/L	93.6	
CDL01	0943999		MERCURY	.0002		.000214	mg/L	107	
CCV	0944022		MERCURY	.003		.0026	mg/L	86.7	
BLA01	0944023		MERCURY			< .00008	mg/L		
LCS	0939758		MERCURY	.003		.00272	mg/L	90.7	
BLA02	0939759		MERCURY			< .00008	mg/L		
SAMPLE	A313422		See Certificate of Analysis						
BLA01	0944024		MERCURY			< .00008	mg/L		
CCV	0944025		MERCURY	.003		.00282	mg/L	94	
CDL01	0944026		MERCURY	.0002		.000183	mg/L	91.5	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >6152J Run: R220683

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0946126	A313421	BENZENE	0	10	9.74	ug/L	97.4	
SPI01	0946126	A313421	CARBON TETRACHLORIDE	0	10	8.77	ug/L	87.7	
SPI01	0946126	A313421	1,2-DICHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	1,1-DICHLOROETHENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	1,1,1-TRICHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	TRICHLOROETHENE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	VINYL CHLORIDE	0	10	9.35	ug/L	93.5	
SPI01	0946126	A313421	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	BROMOFORM	0	10	9.51	ug/L	95.1	
SPI01	0946126	A313421	BROMOMETHANE	0	10	9.66	ug/L	96.6	
SPI01	0946126	A313421	CHLOROBENZENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	DIBROMOCHLOROMETHANE	0	10	9.44	ug/L	94.4	
SPI01	0946126	A313421	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	CHLOROFORM	0	10	10.7	ug/L	107	
SPI01	0946126	A313421	CHLOROMETHANE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	TRANS-1,2-DICHLOROETHENE	0	10	9.68	ug/L	96.8	
SPI01	0946126	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	0946126	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.3	ug/L	103	
SPI01	0946126	A313421	1,1-DICHLOROETHANE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	1,2-DICHLOROPROPANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	11	ug/L	110	
SPI01	0946126	A313421	ETHYL BENZENE	0	10	9.24	ug/L	92.4	
SPI01	0946126	A313421	STYRENE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	1,1,2-TRICHLOROETHANE	0	10	11.3	ug/L	113	
SPI01	0946126	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	TETRACHLOROETHENE	0	10	9.05	ug/L	90.5	
SPI01	0946126	A313421	TOLUENE	0	10	10.5	ug/L	105	
SPI01	0946126	A313421	ACETONE	7.5	10	19.9	ug/L	124	
SPI01	0946126	A313421	CARBON DISULFIDE	0	10	9.25	ug/L	92.5	
SPI01	0946126	A313421	4-METHYL-2-PENTANONE	0	10	8.98	ug/L	89.8	
SPI01	0946126	A313421	2-HEXANONE	0	10	10.9	ug/L	109	
DPS01	0946127	A313421	BENZENE	0	10	9.93	ug/L	99.3	1.9
DPS01	0946127	A313421	CARBON TETRACHLORIDE	0	10	9.36	ug/L	93.6	6.5
DPS01	0946127	A313421	1,2-DICHLOROETHANE	0	10	10.1	ug/L	101	6.7
DPS01	0946127	A313421	1,1-DICHLOROETHENE	0	10	10.5	ug/L	105	8.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q946127	A313421	1,1,1-TRICHLOROETHANE	0	10	10.1	ug/L	101	3.1
DPS01	Q946127	A313421	TRICHLOROETHENE	0	10	10.9	ug/L	109	6.6
DPS01	Q946127	A313421	VINYL CHLORIDE	0	10	10.2	ug/L	102	[illegible]
DPS01	Q946127	A313421	BROMODICHLOROMETHANE	0	10	10.3	ug/L	103	
DPS01	Q946127	A313421	BROMOFORM	0	10	9.42	ug/L	94.2	[illegible]
DPS01	Q946127	A313421	BROMOMETHANE	0	10	10.1	ug/L	101	4.5
DPS01	Q946127	A313421	CHLOROBENZENE	0	10	10.1	ug/L	101	4.7
DPS01	Q946127	A313421	DIBROMOCHLOROMETHANE	0	10	9.3	ug/L	93	1.5
DPS01	Q946127	A313421	CHLOROETHANE	0	10	10.5	ug/L	105	7
DPS01	Q946127	A313421	CHLOROFORM	0	10	10.4	ug/L	104	2.8
DPS01	Q946127	A313421	CHLOROMETHANE	0	10	10.1	ug/L	101	6.9
DPS01	Q946127	A313421	TRANS-1,2-DICHLOROETHENE	0	10	10.4	ug/L	104	7.2
DPS01	Q946127	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	0
DPS01	Q946127	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.2	ug/L	102	1
DPS01	Q946127	A313421	1,1-DICHLOROETHANE	0	10	10.4	ug/L	104	1.9
DPS01	Q946127	A313421	1,2-DICHLOROPROPANE	0	10	10.5	ug/L	105	.9
DPS01	Q946127	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.3	ug/L	103	2.9
DPS01	Q946127	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	5.6
DPS01	Q946127	A313421	ETHYL BENZENE	0	10	9.99	ug/L	99.9	7.8
DPS01	Q946127	A313421	STYRENE	0	10	9.65	ug/L	96.5	2.3
DPS01	Q946127	A313421	1,1,2-TRICHLOROETHANE	0	10	10.5	ug/L	105	7.3
DPS01	Q946127	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	0
DPS01	Q946127	A313421	TETRACHLOROETHENE	0	10	10	ug/L	100	10
DPS01	Q946127	A313421	TOLUENE	0	10	10.7	ug/L	107	1.9
DPS01	Q946127	A313421	ACETONE	7.5	10	16.3	ug/L	88	34
DPS01	Q946127	A313421	CARBON DISULFIDE	0	10	9.74	ug/L	97.4	5.2
DPS01	Q946127	A313421	4-METHYL-2-PENTANONE	0	10	8.28	ug/L	82.8	8.1
DPS01	Q946127	A313421	2-HEXANONE	0	10	10.5	ug/L	105	[illegible]
CCV	Q946126		See Attached Report g6141j.ind						
BLA01	Q946125		See Attached Report g6142j.ind						
SAMPLE	A313422		See Certificate of Analysis						

Comments

Q946126 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q946127 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 20-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 22-JUN-94 File ID: >6798F Run: R221127

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q938222	A313337	PHENOL	0	200	81	ug/L	40.5	
SPI02	Q938222	A313337	2-CHLOROPHENOL	0	200	157	ug/L	78.5	
SPI02	Q938222	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	149	ug/L	74.5	
SPI02	Q938222	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	166	ug/L	83	
SPI02	Q938222	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	
SPI02	Q938222	A313337	4-CHLORO-3-METHYLPHENOL	0	200	166	ug/L	83	
SPI02	Q938222	A313337	ACENAPHTHENE	0	200	164	ug/L	82	
SPI02	Q938222	A313337	4-NITROPHENOL	0	200	82.8	ug/L	41.4	
SPI02	Q938222	A313337	2,4-DINITROTOLUENE	0	200	179	ug/L	89.5	
SPI02	Q938222	A313337	PENTACHLOROPHENOL	0	200	181	ug/L	90.5	
SPI02	Q938222	A313337	PYRENE	0	200	179	ug/L	89.5	
DPS02	Q938223	A313337	PHENOL	0	200	73.5	ug/L	36.8	9.6
DPS02	Q938223	A313337	2-CHLOROPHENOL	0	200	154	ug/L	77	
DPS02	Q938223	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	146	ug/L	73	
DPS02	Q938223	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	163	ug/L	81.5	1.8
DPS02	Q938223	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	0
DPS02	Q938223	A313337	4-CHLORO-3-METHYLPHENOL	0	200	157	ug/L	78.5	5.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0938223	A313337	ACENAPHTHENE	0	200	159	ug/L	79.5	3.1
DPS02	0938223	A313337	4-NITROPHENOL	0	200	70.7	ug/L	35.4	15.6
DPS02	0938223	A313337	2,4-DINITROTOLUENE	0	200	171	ug/L	85.5	4.6
DPS02	0938223	A313337	PENTACHLOROPHENOL	0	200	175	ug/L	87.5	3.4
DPS02	0938223	A313337	PYRENE	0	200	181	ug/L	90.5	1.1
CCV	0949061		See Attached Report g6795f.ind						
BLA02	0944900		See Attached Report g7682h.ind						
SAMPLE	A313422		See Certificate of Analysis						
LCS	0938221	HLI	ACENAPHTHENE	100		83.5	ug/L	83.5	
LCS	0938221	HLI	ACENAPHTHYLENE	100		71.9	ug/L	71.9	
LCS	0938221	HLI	ANTHRACENE	100		77.4	ug/L	77.4	
LCS	0938221	HLI	BENZO(A)PYRENE	100		77.7	ug/L	77.7	
LCS	0938221	HLI	BENZO(B)FLUORANTHENE	100		76.8	ug/L	76.8	
LCS	0938221	HLI	BENZO(G,H,I)PERYLENE	100		84.2	ug/L	84.2	
LCS	0938221	HLI	BENZO(K)FLUORANTHENE	100		76.5	ug/L	76.5	
LCS	0938221	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	100		84.5	ug/L	84.5	
LCS	0938221	HLI	BIS(2-CHLOROETHOXY)METHANE	100		80.9	ug/L	80.9	
LCS	0938221	HLI	BIS(2-CHLOROETHYL)ETHER	100		71.5	ug/L	71.5	
LCS	0938221	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100		71.4	ug/L	71.4	
LCS	0938221	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100		86.6	ug/L	86.6	
LCS	0938221	HLI	4-BROMODIPHENYL ETHER	100		79.2	ug/L	79.2	
LCS	0938221	HLI	CARBAZOLE	100		85	ug/L	85	
LCS	0938221	HLI	4-CHLOROANILINE	100		83.8	ug/L	83.8	
LCS	0938221	HLI	2-CHLORONAPHTHALENE	100		99.1	ug/L	99.1	
LCS	0938221	HLI	4-CHLOROPHENYL-PHENYLETHER	100		81.8	ug/L	81.8	
LCS	0938221	HLI	CHRYSENE	100		83.8	ug/L	83.8	
LCS	0938221	HLI	DIBENZ(A,H)ANTHRACENE	100		98.4	ug/L	98.4	
LCS	0938221	HLI	DIBENZOFURAN	100		81.2	ug/L	81.2	
LCS	0938221	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	100		64.6	ug/L	64.6	
LCS	0938221	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	100		64.8	ug/L	64.8	
LCS	0938221	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	100		64.4	ug/L	64.4	
LCS	0938221	HLI	3,3'-DICHLOROBENZIDINE	100		106	ug/L	106	
LCS	0938221	HLI	DIETHYLPHTHALATE	100		69.8	ug/L	69.8	
LCS	0938221	HLI	DIMETHYLPHTHALATE	100		47.5	ug/L	47.5	
LCS	0938221	HLI	DI-N-BUTYLPHTHALATE	100		75.7	ug/L	75.7	
LCS	0938221	HLI	2,4-DINITROTOLUENE	100		85.5	ug/L	85.5	
LCS	0938221	HLI	2,6-DINITROTOLUENE	100		84.9	ug/L	84.9	
LCS	0938221	HLI	DI-N-OCTYLPHTHALATE	100		71.6	ug/L	71.6	
LCS	0938221	HLI	FLUORANTHENE	100		79.8	ug/L	79.8	
LCS	0938221	HLI	FLUORENE	100		82.3	ug/L	82.3	
LCS	0938221	HLI	HEXACHLOROBENZENE	100		79.3	ug/L	79.3	
LCS	0938221	HLI	HEXACHLOROBUTADIENE	100		71.4	ug/L	71.4	
LCS	0938221	HLI	HEXACHLOROCYCLOPENTADIENE	100		111	ug/L	111	
LCS	0938221	HLI	HEXACHLOROETHANE	100		65.5	ug/L	65.5	
LCS	0938221	HLI	INDENO(1,2,3-CD)PYRENE	100		83.3	ug/L	83.3	
LCS	0938221	HLI	ISOPHORONE	100		83.6	ug/L	83.6	
LCS	0938221	HLI	2-METHYLNAPHTHALENE	100		78.5	ug/L	78.5	
LCS	0938221	HLI	NAPHTHALENE	100		75.2	ug/L	75.2	
LCS	0938221	HLI	2-NITROANILINE (O-NITROANILINE)	100		87.6	ug/L	87.6	
LCS	0938221	HLI	3-NITROANILINE (M-NITROANILINE)	100		90.1	ug/L	90.1	
LCS	0938221	HLI	4-NITROANILINE (P-NITROANILINE)	100		92.4	ug/L	92.4	
LCS	0938221	HLI	NITROBENZENE	100		82.5	ug/L	82.5	
LCS	0938221	HLI	N-NITROSODIPHENYLAMINE	100		158	ug/L	158	
LCS	0938221	HLI	N-NITROSO-DI-N-PROPYLAMINE	100		80.3	ug/L	80.3	
LCS	0938221	HLI	PHENANTHRENE	100		79.9	ug/L	79.9	
LCS	0938221	HLI	PYRENE	100		86.8	ug/L	86.8	
LCS	0938221	HLI	1,2,4-TRICHLOROBENZENE	100		75.7	ug/L	75.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0938221	HLI	2-CHLOROPHENOL	100		75.8	ug/L	75.8	
LCS	0938221	HLI	2,4-DICHLOROPHENOL	100		79.9	ug/L	79.9	
LCS	0938221	HLI	2,4-DIMETHYLPHENOL	100		53.3	ug/L	53.3	
LCS	0938221	HLI	2,4-DINITROPHENOL	100		98.9	ug/L	98.9	
LCS	0938221	HLI	2-METHYLPHENOL (O-CRESOL)	100		70.1	ug/L	70.1	
LCS	0938221	HLI	4-METHYLPHENOL (P-CRESOL)	100		63.6	ug/L	63.6	
LCS	0938221	HLI	2-NITROPHENOL	100		85	ug/L	85	
LCS	0938221	HLI	4-NITROPHENOL	100		40.1	ug/L	40.1	
LCS	0938221	HLI	PENTACHLOROPHENOL	100		85.1	ug/L	85.1	
LCS	0938221	HLI	PHENOL	100		39.8	ug/L	39.8	
LCS	0938221	HLI	2,4,5-TRICHLOROPHENOL	100		78.4	ug/L	78.4	
LCS	0938221	HLI	2,4,6-TRICHLOROPHENOL	100		81.6	ug/L	81.6	

Comments

Q938222 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q938223 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0939796	A313421	GAMMA-BHC (LINDANE)	0	.00048	.000469	mg/L	97.7	6.3
DPS02	0939796	A313421	HEPTACHLOR	0	.00048	.00052	mg/L	108.3	1.9
DPS02	0939796	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	0
DPS02	0939796	A313421	DIELDRIN	0	.001	.00118	mg/L	118	4.3
DPS02	0939796	A313421	ENDRIN	0	.001	.00128	mg/L	128	9
DPS02	0939796	A313421	4,4'-DDT	0	.001	.00094	mg/L	94	7.2
SPI02	0939775	A313421	GAMMA-BHC (LINDANE)	0	.00048	.00044	mg/L	91.7	
SPI02	0939775	A313421	HEPTACHLOR	0	.00048	.00051	mg/L	106.3	
SPI02	0939775	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	
SPI02	0939775	A313421	DIELDRIN	0	.001	.00113	mg/L	113	
SPI02	0939775	A313421	ENDRIN	0	.001	.00117	mg/L	117	
SPI02	0939775	A313421	4,4'-DDT	0	.001	.00101	mg/L	101	
BLA02	0939793		ALPHA-BHC			< .00002	mg/L		
BLA02	0939793		BETA-BHC			< .00002	mg/L		
BLA02	0939793		DELTA-BHC			< .00002	mg/L		
BLA02	0939793		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0939793		HEPTACHLOR			< .00002	mg/L		
BLA02	0939793		ALDRIN			< .00002	mg/L		
BLA02	0939793		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0939793		ENDOSULFAN I			< .00002	mg/L		
BLA02	0939793		DIELDRIN			< .00004	mg/L		
BLA02	0939793		4,4'-DDE			< .00004	mg/L		
BLA02	0939793		ENDRIN			< .00004	mg/L		
BLA02	0939793		ENDOSULFAN II			< .00004	mg/L		
BLA02	0939793		4,4'-DDD			< .00004	mg/L		
BLA02	0939793		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0939793		4,4'-DDT			< .00004	mg/L		
BLA02	0939793		METHOXYCHLOR			< .0002	mg/L		
BLA02	0939793		ENDRIN KETONE			< .00004	mg/L		
BLA02	0939793		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0939793		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0939793		TOXAPHENE			< .0004	mg/L		
BLA02	0939793		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313422

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q939793		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q939794		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	Q939794		HEPTACHLOR	.0005		.00051	mg/L	102	
LCS	Q939794		ALDRIN	.0005		.00052	mg/L	104	
LCS	Q939794		DIELDRIN	.001		.0012	mg/L	120	
LCS	Q939794		ENDRIN	.001		.0012	mg/L	120	
LCS	Q939794		4,4'-DDT	.001		.00099	mg/L	99	
SAMPLE	A313422		See Certificate of Analysis						

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: N. Kemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313423
	Complete	PO Number
	01-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	04-JUN-94 15:15

Sample Description

SAMPLE ID: SW-060494-WP-039
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : C. BOYLE — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
SPI02	0941046	A313422	CYANIDE	0	.1	.086	mg/L	86	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941044		CYANIDE	.1		.095	mg/L	95	
BLA01	0941045		CYANIDE			-.0003	mg/L		
BLA02	0940937		CYANIDE			.005	mg/L		
LFB02	0940962		CYANIDE	.3		.247	mg/L	82.3	
SAMPLE	A313423		See Certificate of Analysis						
CCV	0941060		CYANIDE	.1		.096	mg/L	96	
BLA01	0941061		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : M. JAD — Analysis Date: 10-JUN-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 13-JUN-94 — File ID: — Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940674	PERKIN ELM	ALUMINUM	2.00		2.03	mg/L	102	
ICV01	0940579	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP02	0935524	A313423	ALUMINUM	.536		.492	mg/L		9
SPI02	0935522	A313423	ALUMINUM	.536	2	2.44	mg/L	95	
CDL01	0940565	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	0940564	PERKIN ELM	ALUMINUM	500		516.	mg/L	103	
CCV	0940618	INORGANIC	ALUMINUM	5.00		5.02	mg/L	100	
BLA01	0940617	NA	ALUMINUM			< 0.02	mg/L		
LCS	0935520	SPEX	ALUMINUM	20.0		18.3	mg/L	92	
BLA02	0935521	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	ALUMINUM	5.00		5.03	mg/L	101	
BLA01	0940610	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0940558	PERKIN ELM	ALUMINUM	500		502.	mg/L	100	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q940673	PERKIN ELM	ANTIMONY	0.400		0.394	mg/L	99
DUP02	Q935524	A313423	ANTIMONY	0		BDL	mg/L	
SPI02	Q935522	A313423	ANTIMONY	0	0.500	0.465	mg/L	93
CDL01	Q940566	PERKIN ELM	ANTIMONY	0.120		0.130	mg/L	108
CCV	Q940618	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940617	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q935520	SPEX	ANTIMONY	5.00		4.45	mg/L	89
BLA02	Q935521	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A313423		See Certificate of Analysis					
CCV	Q940609	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101
BLA01	Q940610	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q940556	PERKIN ELM	ANTIMONY	0.120		0.133	mg/L	111

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940674	PERKIN ELM	BARIUM	2.00		2.09	mg/L	105	
ICV01	Q940579	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q935524	A313423	BARIUM	.0192		.0192	mg/L		0
SPI02	Q935522	A313423	BARIUM	.0192	2	1.97	mg/L	98	
CDL01	Q940565	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q940564	PERKIN ELM	BARIUM	0.500		0.519	mg/L	104	
CCV	Q940618	INORGANIC	BARIUM	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	BARIUM			< 0.004	mg/L		
LCS	Q935520	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	Q935521	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	Q940609	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q940610	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q940558	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	BERYLLIUM	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	BERYLLIUM	0		BDL	mg/L		
SPI02	Q935522	A313423	BERYLLIUM	0	0.050	0.0517	mg/L	103	
CDL01	Q940565	INORGANIC	BERYLLIUM	10		10.0	mg/L	100	
ICS-A	Q940564	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q940618	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	Q940617	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935520	SPEX	BERYLLIUM	0.500		0.476	mg/L	95	
BLA02	Q935521	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	Q940609	INORGANIC	BERYLLIUM	5.00		5.13	mg/L	103	
BLA01	Q940610	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q940556	PERKIN ELM	BERYLLIUM	0.010		0.0109	mg/L	109	
ICS-A	Q940558	PERKIN ELM	BERYLLIUM	0.500		0.492	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	CADMIUM	0.400		0.418	mg/L	105	
DUP02	0935524	A313423	CADMIUM	0		BDL	mg/L		
SPI02	0935522	A313423	CADMIUM	0	0.050	0.0428	mg/L	86	
CDL01	0940565	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	CADMIUM	1.00		0.922	mg/L	92	
CCV	0940618	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	0940617	NA	CADMIUM			< 0.002	mg/L		
LCS	0935525	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	0935526	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	CADMIUM	5.00		5.03	mg/L	101	
BLA01	0940610	NA	CADMIUM			< 0.002	mg/L		
CDL01	0940556	PERKIN ELM	CADMIUM	0.010		0.0123	mg/L	123	
ICS-A	0940558	PERKIN ELM	CADMIUM	1.00		0.890	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940568	SPEX	CALCIUM	100		98.2	mg/L	98	
DUP02	0935524	A313423	CALCIUM	28.9		29.2	mg/L		1
SPI02	0935522	A313423	CALCIUM	28.9	100	121	mg/L	92	
ICS-A	0940564	PERKIN ELM	CALCIUM	500		476.	mg/L	95	
CCV	0940618	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	0940617	NA	CALCIUM			< 0.08	mg/L		
LCS	0935520	SPEX	CALCIUM	100		91.3	mg/L	91	
BLA02	0935521	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	CALCIUM	50.0		50.1	mg/L	100	
BLA01	0940610	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0940558	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	CHROMIUM	0.400		0.421	mg/L	105	
DUP02	0935524	A313423	CHROMIUM	0		BDL	mg/L		
SPI02	0935522	A313423	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	0940565	INORGANIC	CHROMIUM	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	0940618	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	0940617	NA	CHROMIUM			< 0.004	mg/L		
LCS	0935520	SPEX	CHROMIUM	2.00		1.89	mg/L	95	
BLA02	0935521	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	0940610	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0940556	PERKIN ELM	CHROMIUM	0.020		0.0261	mg/L	131	
ICS-A	0940558	PERKIN ELM	CHROMIUM	0.500		0.478	mg/L	96	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0940673	PERKIN ELM	COBALT	0.400		0.419	mg/L	105
DUP02	0935524	A313423	COBALT	0		BDL	mg/L	
SPI02	0935522	A313423	COBALT	0	0.500	0.480	mg/L	96
CDL01	0940565	INORGANIC	COBALT	10		9.97	mg/L	100
ICS-A	0940564	PERKIN ELM	COBALT	0.500		0.474	mg/L	95
CCV	0940618	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	0940617	NA	COBALT			< 0.004	mg/L	
LCS	0935520	SPEX	COBALT	5.00		4.59	mg/L	92
BLA02	0935521	NA	COBALT			< 0.004	mg/L	
SAMPLE	A313423		See Certificate of Analysis					
CCV	0940609	INORGANIC	COBALT	5.00		5.02	mg/L	100
BLA01	0940610	NA	COBALT			< 0.004	mg/L	
CDL01	0940556	PERKIN ELM	COBALT	0.100		0.114	mg/L	114
ICS-A	0940558	PERKIN ELM	COBALT	0.500		0.460	mg/L	92

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0944479	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP02	0935524	A313423	COPPER	0		BDL	mg/L		
SPI02	0935522	A313423	COPPER	0	0.250	0.245	mg/L	98	
CDL01	0944473	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	0944472	PERKIN ELM	COPPER	0.500		0.513	mg/L	103	
CCV	0944451	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	0944450	NA	COPPER			< 0.008	mg/L		
LCS	0935520	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0935521	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0944441	INORGANIC	COPPER	5.00		5.06	mg/L	101	
BLA01	0944440	NA	COPPER			< 0.008	mg/L		

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0935524	A313423	IRON	1.1		1.04	mg/L		6
SPI02	0935522	A313423	IRON	1.1	1	1.95	mg/L	85	
CDL01	0940565	INORGANIC	IRON	10		10.0	mg/L	100	
ICS-A	0940564	PERKIN ELM	IRON	200		189.	mg/L	95	
CCV	0940618	INORGANIC	IRON	5.00		5.47	mg/L	109	
BLA01	0940617	NA	IRON			< 0.01	mg/L		
LCS	0935520	SPEX	IRON	10.0		9.67	mg/L	97	
BLA02	0935521	NA	IRON			< 0.01	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	IRON	5.00		5.40	mg/L	108	
BLA01	0940610	NA	IRON			< 0.01	mg/L		
ICS-A	0940558	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940568	SPEX	MAGNESIUM	100		99.8	mg/L	100	
DUP02	Q935524	A313423	MAGNESIUM	14.9		15.1	mg/L		1
SPI02	Q935522	A313423	MAGNESIUM	14.9	100	108	mg/L	93	
ICS-A	Q940564	PERKIN ELM	MAGNESIUM	500		492.	mg/L	98	
CCV	Q940618	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q940617	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935520	SPEX	MAGNESIUM	100.		90.7	mg/L	91	
BLA02	Q935521	NA	MAGNESIUM			.224	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	Q940609	INORGANIC	MAGNESIUM	50.0		50.3	mg/L	101	
BLA01	Q940610	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q940558	PERKIN ELM	MAGNESIUM	500		494.	mg/L	99	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940673	PERKIN ELM	MANGANESE	0.400		0.413	mg/L	103	
DUP02	Q935524	A313423	MANGANESE	.0566		.0566	mg/L		0
SPI02	Q935522	A313423	MANGANESE	.0566	.5	.535	mg/L	96	
CDL01	Q940565	INORGANIC	MANGANESE	10		9.99	mg/L	100	
ICS-A	Q940564	PERKIN ELM	MANGANESE	0.500		0.509	mg/L	102	
CCV	Q940618	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q940617	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935520	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	Q935521	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	Q940609	INORGANIC	MANGANESE	5.00		4.98	mg/L	100	
BLA01	Q940610	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q940556	PERKIN ELM	MANGANESE	0.030		0.0369	mg/L	123	
ICS-A	Q940558	PERKIN ELM	MANGANESE	0.500		0.492	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 16-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220460

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944479	PERKIN ELM	NICKEL	0.400		0.410	mg/L	103	
DUP02	Q935524	A313423	NICKEL	.0156		BDL	mg/L		44
SPI02	Q935522	A313423	NICKEL	.0156	.5	.466	mg/L	90	
CDL01	Q944473	INORGANIC	NICKEL	10		10.1	mg/L	101	
ICS-A	Q944472	PERKIN ELM	NICKEL	1.00		0.871	mg/L	87	
CCV	Q944451	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944450	NA	NICKEL			< 0.004	mg/L		
LCS	Q935520	SPEX	NICKEL	5.00		4.46	mg/L	89	
BLA02	Q935521	NA	NICKEL			.01	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	Q944441	INORGANIC	NICKEL	5.00		4.92	mg/L	98	
BLA01	Q944440	NA	NICKEL			< 0.004	mg/L		
CDL01	Q944417	PERKIN ELM	NICKEL	0.080		0.114	mg/L	143	
ICS-A	Q944416	PERKIN ELM	NICKEL	1.00		0.943	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0940674	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0940568	SPEX	POTASSIUM	100		103.	mg/L	103	
ICV01	0940579	PERKIN ELM	POTASSIUM	20.0		19.2	mg/L	96	
DUP02	0935524	A313423	POTASSIUM	2.05		1.93	mg/L		6
SPI02	0935522	A313423	POTASSIUM	2.05	100	95.3	mg/L	93	
CCV	0940618	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	0940617	NA	POTASSIUM			< 0.08	mg/L		
LCS	0935520	SPEX	POTASSIUM	100		90.1	mg/L	90	
BLA02	0935521	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	POTASSIUM	50.0		48.9	mg/L	98	
BLA01	0940610	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0944745	PERKIN ELM	SILVER	2.00		2.04	mg/L	102	
DUP02	0942774	A313423	SILVER	0		BDL	mg/L		
SPI02	0942772	A313423	SILVER	0	0.050	0.0501	mg/L	100	
CDL01	0944741	INORGANIC	SILVER	2		2.03	mg/L	102	
ICS-A	0944740	PERKIN ELM	SILVER	1.00		0.992	mg/L	99	
CCV	0944737	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0944736	NA	SILVER			< 0.004	mg/L		
LCS	0942770	SPEX	SILVER	0.500		0.466	mg/L	93	
BLA02	0942771	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0944723	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	0944720	NA	SILVER			< 0.004	mg/L		
CDL01	0944756	PERKIN ELM	SILVER	0.020		0.0254	mg/L	127	
ICS-A	0944755	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940674	PERKIN ELM	SODIUM	2		2.04	mg/L	102	
ICV01	0940568	SPEX	SODIUM	100		102.	mg/L	102	
ICV01	0940579	PERKIN ELM	SODIUM	2		1.88	mg/L	94	
DUP02	0935524	A313423	SODIUM	4.47		4.56	mg/L		2
SPI02	0935522	A313423	SODIUM	4.47	100	97.5	mg/L	93	
CCV	0940618	INORGANIC	SODIUM	50.0		49.0	mg/L	98	
BLA01	0940617	NA	SODIUM			< 0.08	mg/L		
LCS	0935520	SPEX	SODIUM	100		90.9	mg/L	91	
BLA02	0935521	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	SODIUM	50.0		48.8	mg/L	98	
BLA01	0940610	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	VANADIUM	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	VANADIUM	0		BDL	mg/L		
SPI02	0935522	A313423	VANADIUM	0	0.500	0.483	mg/L	97	
CDL01	0940565	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	0940564	PERKIN ELM	VANADIUM	0.500		0.483	mg/L	97	
CCV	0940618	INORGANIC	VANADIUM	5.00		5.03	mg/L	101	
BLA01	0940617	NA	VANADIUM			< 0.004	mg/L		
LCS	0935520	SPEX	VANADIUM	5.00		4.60	mg/L	92	
BLA02	0935521	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	VANADIUM	5.00		5.04	mg/L	101	
BLA01	0940610	NA	VANADIUM			< 0.004	mg/L		
CDL01	0940556	PERKIN ELM	VANADIUM	0.100		0.110	mg/L	110	
ICS-A	0940558	PERKIN ELM	VANADIUM	0.500		0.476	mg/L	95	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 10-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 13-JUN-94 File ID: Run: R219896

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940673	PERKIN ELM	ZINC	0.400		0.409	mg/L	102	
DUP02	0935524	A313423	ZINC	0		BDL	mg/L		
SPI02	0935522	A313423	ZINC	0	0.500	0.498	mg/L	100	
CDL01	0940565	INORGANIC	ZINC	10		9.93	mg/L	99	
ICS-A	0940564	PERKIN ELM	ZINC	1.00		1.03	mg/L	103	
CCV	0940618	INORGANIC	ZINC	5.00		5.08	mg/L	102	
BLA01	0940617	NA	ZINC			< 0.008	mg/L		
LCS	0935520	SPEX	ZINC	5.00		4.57	mg/L	91	
BLA02	0935521	NA	ZINC			.0231	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0940609	INORGANIC	ZINC	5.00		5.09	mg/L	102	
BLA01	0940610	NA	ZINC			< 0.008	mg/L		
ICS-A	0940558	PERKIN ELM	ZINC	1.00		1.00	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	ARSENIC	.04		0.0398	mg/L	100	
DUP02	0935524	A313423	ARSENIC	0		BDL	mg/L		
SPI02	0935522	A313423	ARSENIC	0	2	2.05	mg/L	103	
CDL01	0947033	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	0947032	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	0947031	NA	ARSENIC			< 0.002	mg/L		
LCS	0935525	INORGANIC	ARSENIC	.5		0.483	mg/L	97	
BLA02	0935526	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0947028	INORGANIC	ARSENIC	.1		0.105	mg/L	105	
BLA01	0947027	NA	ARSENIC			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	ARSENIC	.02		0.0225	mg/L	113	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0947037	PERKIN-ELM	LEAD	.04		0.0406	mg/L	102
DUP02	0935524	A313423	LEAD	0		BDL	mg/L	
SPI02	0935522	A313423	LEAD	0	0.500	0.477	mg/L	95
ICS-A	0947040	PERKIN ELM	LEAD	1		0.954	mg/L	95
CDL01	0947033	INORGANIC	LEAD	.5		0.501	mg/L	100
CCV	0947032	INORGANIC	LEAD	.1		0.102	mg/L	102
BLA01	0947031	NA	LEAD			< 0.002	mg/L	
LCS	0935525	INORGANIC	LEAD	.5		0.492	mg/L	98
BLA02	0935526	NA	LEAD			< 0.002	mg/L	
SAMPLE	A313423		See Certificate of Analysis					
CCV	0947028	INORGANIC	LEAD	.1		0.103	mg/L	103
BLA01	0947027	NA	LEAD			< 0.002	mg/L	
CDL01	0947025	PERKIN-ELM	LEAD	.006		0.00571	mg/L	95
ICS-A	0947024	PERKIN ELM	LEAD	1		0.959	mg/L	96

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	SELENIUM	.04		0.0402	mg/L	101	
DUP02	0935524	A313423	SELENIUM	0		BDL	mg/L		
SPI02	0935522	A313423	SELENIUM	0	2	2.02	mg/L	101	
CDL01	0947033	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	0947032	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	0947031	NA	SELENIUM			< 0.002	mg/L		
LCS	0935525	INORGANIC	SELENIUM	.5		0.478	mg/L	96	
BLA02	0935526	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0947028	INORGANIC	SELENIUM	.1		0.105	mg/L	105	
BLA01	0947027	NA	SELENIUM			< 0.002	mg/L		
CDL01	0947025	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220859
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947037	PERKIN-ELM	THALLIUM	.04		0.0399	mg/L	100	
DUP02	0935524	A313423	THALLIUM	0		BDL	mg/L		
SPI02	0935522	A313423	THALLIUM	0	3.00	2.57	mg/L	86	
CDL01	0947033	INORGANIC	THALLIUM	.5		0.502	mg/L	100	
CCV	0947032	INORGANIC	THALLIUM	.1		0.101	mg/L	101	
BLA01	0947031	NA	THALLIUM			< 0.004	mg/L		
LCS	0935525	INORGANIC	THALLIUM	.5		0.487	mg/L	97	
BLA02	0935526	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
CCV	0947028	INORGANIC	THALLIUM	.1		0.0987	mg/L	99	
BLA01	0947027	NA	THALLIUM			< 0.004	mg/L		
CDL01	0947025	PERKIN-ELM	THALLIUM	.02		.0253	mg/L	127	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 14-JUN-94 Instrument: CVAA Test: M120.1.D
Reviewer: S. O'NEAL Review Date: 16-JUN-94 File ID: 000695 Run: R220343

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943995		MERCURY	.00147		.00156	mg/L	106.1	
DUP02	0939762	A313419	MERCURY	0		BDL	mg/L		
SPI02	0939760	A313419	MERCURY	0	.001	.000936	mg/L	93.6	
CDL01	0943999		MERCURY	.0002		.000214	mg/L	107	
CCV	0944022		MERCURY	.003		.0026	mg/L	86.7	
BLA01	0944023		MERCURY			< .00008	mg/L		
LCS	0939758		MERCURY	.003		.00272	mg/L	90.7	
BLA02	0939759		MERCURY			< .00008	mg/L		
SAMPLE	A313423		See Certificate of Analysis						
BLA01	0944024		MERCURY			< .00008	mg/L		
CCV	0944025		MERCURY	.003		.00282	mg/L	94	
CDL01	0944026		MERCURY	.0002		.000183	mg/L	91.5	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >6153J Run: R220683

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0946126	A313421	BENZENE	0	10	9.74	ug/L	97.4	
SPI01	0946126	A313421	CARBON TETRACHLORIDE	0	10	8.77	ug/L	87.7	
SPI01	0946126	A313421	1,2-DICHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	1,1-DICHLOROETHENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	1,1,1-TRICHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	TRICHLOROETHENE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	VINYL CHLORIDE	0	10	9.35	ug/L	93.5	
SPI01	0946126	A313421	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	BROMOFORM	0	10	9.51	ug/L	95.1	
SPI01	0946126	A313421	BROMOMETHANE	0	10	9.66	ug/L	96.6	
SPI01	0946126	A313421	CHLOROBENZENE	0	10	9.64	ug/L	96.4	
SPI01	0946126	A313421	DIBROMOCHLOROMETHANE	0	10	9.44	ug/L	94.4	
SPI01	0946126	A313421	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0946126	A313421	CHLOROFORM	0	10	10.7	ug/L	107	
SPI01	0946126	A313421	CHLOROMETHANE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	TRANS-1,2-DICHLOROETHENE	0	10	9.68	ug/L	96.8	
SPI01	0946126	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	0946126	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.3	ug/L	103	
SPI01	0946126	A313421	1,1-DICHLOROETHANE	0	10	10.2	ug/L	102	
SPI01	0946126	A313421	1,2-DICHLOROPROPANE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.6	ug/L	106	
SPI01	0946126	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	11	ug/L	110	
SPI01	0946126	A313421	ETHYL BENZENE	0	10	9.24	ug/L	92.4	
SPI01	0946126	A313421	STYRENE	0	10	9.43	ug/L	94.3	
SPI01	0946126	A313421	1,1,2-TRICHLOROETHANE	0	10	11.3	ug/L	113	
SPI01	0946126	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	
SPI01	0946126	A313421	TETRACHLOROETHENE	0	10	9.05	ug/L	90.5	
SPI01	0946126	A313421	TOLUENE	0	10	10.5	ug/L	105	
SPI01	0946126	A313421	ACETONE	7.5	10	19.9	ug/L	124	
SPI01	0946126	A313421	CARBON DISULFIDE	0	10	9.25	ug/L	92.5	
SPI01	0946126	A313421	4-METHYL-2-PENTANONE	0	10	8.98	ug/L	89.8	
SPI01	0946126	A313421	2-HEXANONE	0	10	10.9	ug/L	109	
DPS01	0946127	A313421	BENZENE	0	10	9.93	ug/L	99.3	1.9
DPS01	0946127	A313421	CARBON TETRACHLORIDE	0	10	9.36	ug/L	93.6	6.5
DPS01	0946127	A313421	1,2-DICHLOROETHANE	0	10	10.1	ug/L	101	6.7
DPS01	0946127	A313421	1,1-DICHLOROETHENE	0	10	10.5	ug/L	105	8.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q946127	A313421	1,1,1-TRICHLOROETHANE	0	10	10.1	ug/L	101	3.1
DPS01	Q946127	A313421	TRICHLOROETHENE	0	10	10.9	ug/L	109	6.6
DPS01	Q946127	A313421	VINYL CHLORIDE	0	10	10.2	ug/L	102	8.7
DPS01	Q946127	A313421	BROMODICHLOROMETHANE	0	10	10.3	ug/L	103	
DPS01	Q946127	A313421	BROMOFORM	0	10	9.42	ug/L	94.2	
DPS01	Q946127	A313421	BROMOMETHANE	0	10	10.1	ug/L	101	4.5
DPS01	Q946127	A313421	CHLOROBENZENE	0	10	10.1	ug/L	101	4.7
DPS01	Q946127	A313421	DIBROMOCHLOROMETHANE	0	10	9.3	ug/L	93	1.5
DPS01	Q946127	A313421	CHLOROETHANE	0	10	10.5	ug/L	105	7
DPS01	Q946127	A313421	CHLOROFORM	0	10	10.4	ug/L	104	2.8
DPS01	Q946127	A313421	CHLOROMETHANE	0	10	10.1	ug/L	101	6.9
DPS01	Q946127	A313421	TRANS-1,2-DICHLOROETHENE	0	10	10.4	ug/L	104	7.2
DPS01	Q946127	A313421	CIS-1,2-DICHLOROETHENE	0	10	10.1	ug/L	101	0
DPS01	Q946127	A313421	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.2	ug/L	102	1
DPS01	Q946127	A313421	1,1-DICHLOROETHANE	0	10	10.4	ug/L	104	1.9
DPS01	Q946127	A313421	1,2-DICHLOROPROPANE	0	10	10.5	ug/L	105	.9
DPS01	Q946127	A313421	CIS-1,3-DICHLOROPROPENE	0	10	10.3	ug/L	103	2.9
DPS01	Q946127	A313421	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	5.6
DPS01	Q946127	A313421	ETHYL BENZENE	0	10	9.99	ug/L	99.9	7.8
DPS01	Q946127	A313421	STYRENE	0	10	9.65	ug/L	96.5	2.3
DPS01	Q946127	A313421	1,1,2-TRICHLOROETHANE	0	10	10.5	ug/L	105	7.3
DPS01	Q946127	A313421	1,1,2,2-TETRACHLOROETHANE	0	10	10.8	ug/L	108	0
DPS01	Q946127	A313421	TETRACHLOROETHENE	0	10	10	ug/L	100	10
DPS01	Q946127	A313421	TOLUENE	0	10	10.7	ug/L	107	1.9
DPS01	Q946127	A313421	ACETONE	7.5	10	16.3	ug/L	88	34
DPS01	Q946127	A313421	CARBON DISULFIDE	0	10	9.74	ug/L	97.4	5.2
DPS01	Q946127	A313421	4-METHYL-2-PENTANONE	0	10	8.28	ug/L	82.8	8.1
DPS01	Q946127	A313421	2-HEXANONE	0	10	10.5	ug/L	105	3.7
CCV	Q946126		See Attached Report g6141j.ind						
BLA01	Q946125		See Attached Report g6142j.ind						
SAMPLE	A313423		See Certificate of Analysis						

Comments

Q946126 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q946127 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 20-JUN-94 Instrument: GC/MS SVOA Test: Q505.3.0
Reviewer: A. BRADBURN Review Date: 22-JUN-94 File ID: >6799F Run: R221127

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q938222	A313337	PHENOL	0	200	81	ug/L	40.5	
SP102	Q938222	A313337	2-CHLOROPHENOL	0	200	157	ug/L	78.5	
SP102	Q938222	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	149	ug/L	74.5	
SP102	Q938222	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	166	ug/L	83	
SP102	Q938222	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	
SP102	Q938222	A313337	4-CHLORO-3-METHYLPHENOL	0	200	166	ug/L	83	
SP102	Q938222	A313337	ACENAPHTHENE	0	200	164	ug/L	82	
SP102	Q938222	A313337	4-NITROPHENOL	0	200	82.8	ug/L	41.4	
SP102	Q938222	A313337	2,4-DINITROTOLUENE	0	200	179	ug/L	89.5	
SP102	Q938222	A313337	PENTACHLOROPHENOL	0	200	181	ug/L	90.5	
SP102	Q938222	A313337	PYRENE	0	200	179	ug/L	89.5	
DPS02	Q938223	A313337	PHENOL	0	200	73.5	ug/L	36.8	9.6
DPS02	Q938223	A313337	2-CHLOROPHENOL	0	200	154	ug/L	77	9
DPS02	Q938223	A313337	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	200	146	ug/L	73	
DPS02	Q938223	A313337	N-NITROSO-DI-N-PROPYLAMINE	0	200	163	ug/L	81.5	1.8
DPS02	Q938223	A313337	1,2,4-TRICHLOROBENZENE	0	200	156	ug/L	78	0
DPS02	Q938223	A313337	4-CHLORO-3-METHYLPHENOL	0	200	157	ug/L	78.5	5.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q938223	A313337	ACENAPHTHENE	0	200	159	ug/L	79.5	3.1
DPS02	Q938223	A313337	4-NITROPHENOL	0	200	70.7	ug/L	35.4	15.6
DPS02	Q938223	A313337	2,4-DINITROTOLUENE	0	200	171	ug/L	85.5	4.6
DPS02	Q938223	A313337	PENTACHLOROPHENOL	0	200	175	ug/L	87.5	3.4
DPS02	Q938223	A313337	PYRENE	0	200	181	ug/L	90.5	1.1
CCV	Q949061		See Attached Report g6795f.ind						
BLA02	Q944900		See Attached Report g7682h.ind						
SAMPLE	A313423		See Certificate of Analysis						
LCS	Q938221	HLI	ACENAPHTHENE	100		83.5	ug/L	83.5	
LCS	Q938221	HLI	ACENAPHTHYLENE	100		71.9	ug/L	71.9	
LCS	Q938221	HLI	ANTHRACENE	100		77.4	ug/L	77.4	
LCS	Q938221	HLI	BENZO(A)PYRENE	100		77.7	ug/L	77.7	
LCS	Q938221	HLI	BENZO(B)FLUORANTHENE	100		76.8	ug/L	76.8	
LCS	Q938221	HLI	BENZO(G,H,I)PERYLENE	100		84.2	ug/L	84.2	
LCS	Q938221	HLI	BENZO(K)FLUORANTHENE	100		76.5	ug/L	76.5	
LCS	Q938221	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	100		84.5	ug/L	84.5	
LCS	Q938221	HLI	BIS(2-CHLOROETHOXY)METHANE	100		80.9	ug/L	80.9	
LCS	Q938221	HLI	BIS(2-CHLOROETHYL)ETHER	100		71.5	ug/L	71.5	
LCS	Q938221	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100		86.6	ug/L	86.6	
LCS	Q938221	HLI	4-BROMODIPHENYL ETHER	100		79.2	ug/L	79.2	
LCS	Q938221	HLI	CARBAZOLE	100		85	ug/L	85	
LCS	Q938221	HLI	4-CHLOROANILINE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	2-CHLORONAPHTHALENE	100		99.1	ug/L	99.1	
LCS	Q938221	HLI	4-CHLOROPHENYL-PHENYLETHER	100		81.8	ug/L	81.8	
LCS	Q938221	HLI	CHRYSENE	100		83.8	ug/L	83.8	
LCS	Q938221	HLI	DIBENZ(A,H)ANTHRACENE	100		98.4	ug/L	98.4	
LCS	Q938221	HLI	DIBENZOFURAN	100		81.2	ug/L	81.2	
LCS	Q938221	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	100		64.6	ug/L	64.6	
LCS	Q938221	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	100		64.8	ug/L	64.8	
LCS	Q938221	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	100		64.4	ug/L	64.4	
LCS	Q938221	HLI	3,3'-DICHLOROBENZIDINE	100		106	ug/L	106	
LCS	Q938221	HLI	DIETHYLPHTHALATE	100		69.8	ug/L	69.8	
LCS	Q938221	HLI	DIMETHYLPHTHALATE	100		47.5	ug/L	47.5	
LCS	Q938221	HLI	DI-N-BUTYLPHTHALATE	100		75.7	ug/L	75.7	
LCS	Q938221	HLI	2,4-DINITROTOLUENE	100		85.5	ug/L	85.5	
LCS	Q938221	HLI	2,6-DINITROTOLUENE	100		84.9	ug/L	84.9	
LCS	Q938221	HLI	DI-N-OCTYLPHTHALATE	100		71.6	ug/L	71.6	
LCS	Q938221	HLI	FLUORANTHENE	100		79.8	ug/L	79.8	
LCS	Q938221	HLI	FLUORENE	100		82.3	ug/L	82.3	
LCS	Q938221	HLI	HEXACHLOROBENZENE	100		79.3	ug/L	79.3	
LCS	Q938221	HLI	HEXACHLOROBUTADIENE	100		71.4	ug/L	71.4	
LCS	Q938221	HLI	HEXACHLOROCYCLOPENTADIENE	100		111	ug/L	111	
LCS	Q938221	HLI	HEXACHLOROETHANE	100		65.5	ug/L	65.5	
LCS	Q938221	HLI	INDENO(1,2,3-CD)PYRENE	100		83.3	ug/L	83.3	
LCS	Q938221	HLI	ISOPHORONE	100		83.6	ug/L	83.6	
LCS	Q938221	HLI	2-METHYLNAPHTHALENE	100		78.5	ug/L	78.5	
LCS	Q938221	HLI	NAPHTHALENE	100		75.2	ug/L	75.2	
LCS	Q938221	HLI	2-NITROANILINE (O-NITROANILINE)	100		87.6	ug/L	87.6	
LCS	Q938221	HLI	3-NITROANILINE (M-NITROANILINE)	100		90.1	ug/L	90.1	
LCS	Q938221	HLI	4-NITROANILINE (P-NITROANILINE)	100		92.4	ug/L	92.4	
LCS	Q938221	HLI	NITROBENZENE	100		82.5	ug/L	82.5	
LCS	Q938221	HLI	N-NITROSODIPHENYLAMINE	100		158	ug/L	158	
LCS	Q938221	HLI	N-NITROSO-DI-N-PROPYLAMINE	100		80.3	ug/L	80.3	
LCS	Q938221	HLI	PHENANTHRENE	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	PYRENE	100		86.8	ug/L	86.8	
LCS	Q938221	HLI	1,2,4-TRICHLOROBENZENE	100		75.7	ug/L	75.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q938221	HLI	2-CHLOROPHENOL	100		75.8	ug/L	75.8	
LCS	Q938221	HLI	2,4-DICHLOROPHENOL	100		79.9	ug/L	79.9	
LCS	Q938221	HLI	2,4-DIMETHYLPHENOL	100		53.3	ug/L	53.3	
LCS	Q938221	HLI	2,4-DINITROPHENOL	100		98.9	ug/L	98.9	
LCS	Q938221	HLI	2-METHYLPHENOL (O-CRESOL)	100		70.1	ug/L	70.1	
LCS	Q938221	HLI	4-METHYLPHENOL (P-CRESOL)	100		63.6	ug/L	63.6	
LCS	Q938221	HLI	2-NITROPHENOL	100		85	ug/L	85	
LCS	Q938221	HLI	4-NITROPHENOL	100		40.1	ug/L	40.1	
LCS	Q938221	HLI	PENTACHLOROPHENOL	100		85.1	ug/L	85.1	
LCS	Q938221	HLI	PHENOL	100		39.8	ug/L	39.8	
LCS	Q938221	HLI	2,4,5-TRICHLOROPHENOL	100		78.4	ug/L	78.4	
LCS	Q938221	HLI	2,4,6-TRICHLOROPHENOL	100		81.6	ug/L	81.6	

Comments

Q938222 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q938223 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q939796	A313421	GAMMA-BHC (LINDANE)	0	.00048	.000469	mg/L	97.7	6.3
DPS02	Q939796	A313421	HEPTACHLOR	0	.00048	.00052	mg/L	108.3	1.9
DPS02	Q939796	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	0
DPS02	Q939796	A313421	DIELDRIN	0	.001	.00118	mg/L	118	4.3
DPS02	Q939796	A313421	ENDRIN	0	.001	.00128	mg/L	128	9
DPS02	Q939796	A313421	4,4'-DDT	0	.001	.00094	mg/L	94	7.2
SPI02	Q939775	A313421	GAMMA-BHC (LINDANE)	0	.00048	.00044	mg/L	91.7	
SPI02	Q939775	A313421	HEPTACHLOR	0	.00048	.00051	mg/L	106.3	
SPI02	Q939775	A313421	ALDRIN	0	.00048	.00054	mg/L	112.5	
SPI02	Q939775	A313421	DIELDRIN	0	.001	.00113	mg/L	113	
SPI02	Q939775	A313421	ENDRIN	0	.001	.00117	mg/L	117	
SPI02	Q939775	A313421	4,4'-DDT	0	.001	.00101	mg/L	101	
BLA02	Q939793		ALPHA-BHC			< .00002	mg/L		
BLA02	Q939793		BETA-BHC			< .00002	mg/L		
BLA02	Q939793		DELTA-BHC			< .00002	mg/L		
BLA02	Q939793		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR			< .00002	mg/L		
BLA02	Q939793		ALDRIN			< .00002	mg/L		
BLA02	Q939793		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q939793		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q939793		DIELDRIN			< .00004	mg/L		
BLA02	Q939793		4,4'-DDE			< .00004	mg/L		
BLA02	Q939793		ENDRIN			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q939793		4,4'-DDD			< .00004	mg/L		
BLA02	Q939793		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q939793		4,4'-DDT			< .00004	mg/L		
BLA02	Q939793		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q939793		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q939793		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q939793		TOXAPHENE			< .0004	mg/L		
BLA02	Q939793		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q939793		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313423

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0939793		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0939793		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0939793		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0939794		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0939794		HEPTACHLOR	.0005		.00051	mg/L	102	
LCS	0939794		ALDRIN	.0005		.00052	mg/L	104	
LCS	0939794		DIELDRIN	.001		.0012	mg/L	120	
LCS	0939794		ENDRIN	.001		.0012	mg/L	120	
LCS	0939794		4,4'-DDT	.001		.00099	mg/L	99	
SAMPLE	A313423		See Certificate of Analysis						

Notes

<	*Less Than Lower Detection Limit*
BDL	*Below Detection Limit*

Quality Assurance Officer: D. Hummeler

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314356
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 09:10

Sample Description

SAMPLE ID: SW-061594-WP-091
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
BLA01	0954599		CYANIDE			-.001	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	0950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	0956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	0950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	0950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	0956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M102.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	0950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	0950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	0956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SP102	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	0956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SP102	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SP102	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	0956457	NA	COBALT			.011	mg/L		
LCS	0950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	0950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	0956451	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COPPER	0		BDL	mg/L		
SPI02	0950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	0956457	NA	COPPER			< 0.008	mg/L		
LCS	0950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	0956451	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0950793	A314359	IRON	0		BDL	mg/L		
SPI02	0950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	0956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	0956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	0956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	0956457	NA	IRON			< 0.01	mg/L		
LCS	0950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	0950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	0956451	NA	IRON			< 0.01	mg/L		
ICS-A	0956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314356		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960736	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M183.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957729	INORGANIC	ARSENIC	.1		.0897	mg/L	90	
BLA01	0957733	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222655

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314356		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957729	INORGANIC	SELENIUM	.1		0.0921	mg/L	92	
BLA01	0957733	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957729	INORGANIC	THALLIUM	.1		0.0968	mg/L	97	
BLA01	0957733	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953653		MERCURY	.003		.00293	mg/L	97.7	
BLA01	0953654		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314356		See Certificate of Analysis						
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6469J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	4.1
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLOROBENZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953863	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104.3	
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314356		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 08-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >0301B Run: R222796

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPI02	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPI02	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPI02	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPI02	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPI02	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPI02	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPI02	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPI02	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPI02	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPS02	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.3
DPS02	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPS02	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	
DPS02	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	
DPS02	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPS02	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.6
DPS02	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.4
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960292		See Attached Report g0300b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314356		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314356		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314357
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 09:25

Sample Description

SAMPLE ID: SW-061594-WP-092
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q954598		CYANIDE	.234		.213	mg/L	91	
ICV01	Q954624		CYANIDE	.247		.252	mg/L	102	
ICV01	Q954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	Q954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	Q954597		CYANIDE	.01		.01	mg/L	100	
BLA01	Q954599		CYANIDE			-.001	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	Q954606		CYANIDE	.1		.101	mg/L	101	
BLA01	Q954607		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. WILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	Q950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	Q950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	Q956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	Q956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	Q956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	Q956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	Q950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	Q956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. WILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M102.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	Q950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	Q950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	Q956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	
CCV	Q956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	Q950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	Q956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	Q950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	Q950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	Q956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	Q956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	Q956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	Q956457	NA	BARIUM			< 0.004	mg/L		
LCS	Q950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	Q950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	Q956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	Q956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	Q950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	Q950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	Q956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	Q956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	Q956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	Q956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	Q950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	Q956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	Q956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	Q956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	Q950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	Q950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	Q956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	Q956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	0956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SPI02	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	0956457	NA	COBALT			.011	mg/L		
LCS	0950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	0950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	0956451	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COPPER	0		BDL	mg/L		
SPI02	0950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	0956457	NA	COPPER			< 0.008	mg/L		
LCS	0950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	0956451	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0950793	A314359	IRON	0		BDL	mg/L		
SPI02	0950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	0956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	0956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	0956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	0956457	NA	IRON			< 0.01	mg/L		
LCS	0950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	0950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	0956451	NA	IRON			< 0.01	mg/L		
ICS-A	0956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314357		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M183.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957729	INORGANIC	ARSENIC	.1		.0897	mg/L	90	
BLA01	0957733	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222455

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314357		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957729	INORGANIC	SELENIUM	.1		0.0921	mg/L	92	
BLA01	0957733	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957729	INORGANIC	THALLIUM	.1		0.0968	mg/L	97	
BLA01	0957733	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314357		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6470J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	[illegible]
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	[illegible]
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	4.1
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLOROBENZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.[illegible]
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953863	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104.3	?
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	[illegible]
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314357		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-JUL-94 Instrument: GC/MS SVOA Test: Q505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >02908 Run: R222791

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPI02	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPI02	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPI02	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPI02	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPI02	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPI02	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPI02	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPI02	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPI02	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPS02	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.[illegible]
DPS02	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPS02	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	
DPS02	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	[illegible].1
DPS02	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPS02	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.6
DPS02	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.4
DPS02	Q943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	Q943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	Q960260		See Attached Report g0284b.ind						
BLA02	Q950496		See Attached Report g0113b.ind						
SAMPLE	A314357		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	Q946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	Q946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	Q946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	Q946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	Q946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SPI02	Q946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	Q946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	Q946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	Q946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	Q946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	Q946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	Q946010		ALPHA-BHC			< .00002	mg/L		
BLA02	Q946010		BETA-BHC			< .00002	mg/L		
BLA02	Q946010		DELTA-BHC			< .00002	mg/L		
BLA02	Q946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q946010		HEPTACHLOR			< .00002	mg/L		
BLA02	Q946010		ALDRIN			< .00002	mg/L		
BLA02	Q946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q946010		DIELDRIN			< .00004	mg/L		
BLA02	Q946010		4,4'-DDE			< .00004	mg/L		
BLA02	Q946010		ENDRIN			< .00004	mg/L		
BLA02	Q946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q946010		4,4'-DDD			< .00004	mg/L		
BLA02	Q946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q946010		4,4'-DDT			< .00004	mg/L		
BLA02	Q946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q946010		TOXAPHENE			< .0004	mg/L		
BLA02	Q946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	Q946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	Q946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	Q946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	Q946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	Q946011		ENDRIN	.001		.0011	mg/L	110	
LCS	Q946011		4,4'-DDT	.001		.001	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314357		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*

Quality Assurance Officer: D. Summerlin

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314358
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 09:45

Sample Description

SAMPLE ID: SW-061594-WP-093
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES Analysis Date: 29-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 30-JUN-94 File ID: 1156 Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	0950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	0956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	0950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	0950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	0956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	0950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	0950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	0956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0

Reviewer: S. EMDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0

Reviewer: S. EMDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0

Reviewer: S. EMDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	0956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SPI02	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	0956457	NA	COBALT			.011	mg/L		
LCS	0950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	0950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	0956451	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COPPER	0		BDL	mg/L		
SPI02	0950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	0956457	NA	COPPER			< 0.008	mg/L		
LCS	0950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	0956451	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M113.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0950793	A314359	IRON	0		BDL	mg/L		
SPI02	0950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	0956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	0956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	0956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	0956457	NA	IRON			< 0.01	mg/L		
LCS	0950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	0950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	0956451	NA	IRON			< 0.01	mg/L		
ICS-A	0956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314358		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957729	INORGANIC	ARSENIC	.1		.0897	mg/L	90	
BLA01	0957733	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222455

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314358		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957729	INORGANIC	SELENIUM	.1		0.0921	mg/L	92	
BLA01	0957733	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957729	INORGANIC	THALLIUM	.1		0.0968	mg/L	97	
BLA01	0957733	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314358		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHARP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6471J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	[illegible]
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	[illegible]
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	4.1
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLORO[illegible]ZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104.3	[illegible]
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	[illegible]
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314358		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >02918 Run: R222791

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPIO2	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPIO2	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPIO2	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPIO2	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPIO2	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPIO2	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPIO2	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPIO2	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPIO2	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPIO2	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPSO2	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.[illegible]
DPSO2	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPSO2	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	8
DPSO2	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	[illegible].1
DPSO2	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPSO2	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.[illegible]
DPSO2	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960260		See Attached Report g0284b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314358		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SPI02	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314358		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Lemmerler

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314359
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 13:05

Sample Description

SAMPLE ID: SW-061594-WP-094
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. NILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M101.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	0950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956454	INORGANIC	ALUMINUM	5.00		5.04	mg/L	101	
BLA01	0956455	NA	ALUMINUM			< 0.02	mg/L		
LCS	0950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	0950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	0956457	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. NILSCHER — Analysis Date: 03-JUL-94 — Instrument: ICP — Test: M102.3.0
Reviewer: S. ENDERSEN — Review Date: 04-JUL-94 — File ID: — Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	0950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	0950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	0956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956454	INORGANIC	ANTIMONY	1.00		1.03	mg/L	103	
BLA01	0956455	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956454	INORGANIC	BARIUM	5.00		4.95	mg/L	99	
BLA01	0956455	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956454	INORGANIC	BERYLLIUM	5.00		4.87	mg/L	97	
BLA01	0956455	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956454	INORGANIC	CADMIUM	5.00		4.86	mg/L	97	
BLA01	0956455	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956454	INORGANIC	CALCIUM	50.0		48.8	mg/L	98	
BLA01	0956455	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956454	INORGANIC	CHROMIUM	5.00		4.89	mg/L	98	
BLA01	0956455	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SPI02	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956454	INORGANIC	COBALT	5.00		4.87	mg/L	97	
BLA01	0956455	NA	COBALT			.0106	mg/L		
LCS	0950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	0950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	0956457	NA	COBALT			.011	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COPPER	0		BDL	mg/L		
SPI02	0950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956454	INORGANIC	COPPER	5.00		4.95	mg/L	99	
BLA01	0956455	NA	COPPER			< 0.008	mg/L		
LCS	0950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	0956457	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0950793	A314359	IRON	0		BDL	mg/L		
SPI02	0950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	0956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	0956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	0956454	INORGANIC	IRON	5.00		4.90	mg/L	98	
BLA01	0956455	NA	IRON			< 0.01	mg/L		
LCS	0950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	0950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	0956457	NA	IRON			< 0.01	mg/L		
ICS-A	0956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956454	INORGANIC	MAGNESIUM	50.0		48.7	mg/L	97	
BLA01	0956455	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956454	INORGANIC	MANGANESE	5.00		4.89	mg/L	98	
BLA01	0956455	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956454	INORGANIC	NICKEL	5.00		4.82	mg/L	96	
BLA01	0956455	NA	NICKEL			.0129	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956454	INORGANIC	POTASSIUM	50.0		50.4	mg/L	101
BLA01	0956455	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314359		See Certificate of Analysis					
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956454	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956455	NA	SILVER			.0127	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960783	INORGANIC	SODIUM	50		50.8	mg/L	102	
BLA01	0960784	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956454	INORGANIC	VANADIUM	5.00		4.93	mg/L	99	
BLA01	0956455	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956454	INORGANIC	ZINC	5.00		4.88	mg/L	98	
BLA01	0956455	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957729	INORGANIC	ARSENIC	.1		.0897	mg/L	90	
BLA01	0957733	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222455

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314359		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957729	INORGANIC	SELENIUM	.1		0.0921	mg/L	92	
BLA01	0957733	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957729	INORGANIC	THALLIUM	.1		0.0968	mg/L	97	
BLA01	0957733	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314359		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHARP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6472J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	1
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	4.1
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLOROBENZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953863	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104.3	2
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	1
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314359		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >0292B Run: R222791

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPIO2	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPIO2	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPIO2	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPIO2	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPIO2	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPIO2	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPIO2	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPIO2	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPIO2	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPIO2	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPSO2	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.3
DPSO2	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPSO2	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	
DPSO2	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	1
DPSO2	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPSO2	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.6
DPSO2	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.4
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960260		See Attached Report g0284b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314359		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.D

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SPI02	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314359		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*

Quality Assurance Officer: D. Hummerle

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314360
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 13:15

Sample Description

SAMPLE ID: SW-061594-WP-095
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 29-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 30-JUN-94 File ID: 1156 Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q954598		CYANIDE	.234		.213	mg/L	91	
ICV01	Q954624		CYANIDE	.247		.252	mg/L	102	
ICV01	Q954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	Q954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	Q954597		CYANIDE	.01		.01	mg/L	100	
CCV	Q954606		CYANIDE	.1		.101	mg/L	101	
BLA01	Q954607		CYANIDE			-.001	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	Q954609		CYANIDE	.1		.099	mg/L	99	
BLA01	Q954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	Q950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	Q950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	Q956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	Q956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	Q956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	Q956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	Q950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	Q956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	Q950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	Q950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	Q956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	0956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SPI02	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CDL01	Q956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	Q956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	Q956457	NA	COBALT			.011	mg/L		
LCS	Q950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	Q950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	Q956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	Q956451	NA	COBALT			< 0.004	mg/L		
CDL01	Q956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	Q956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	Q950793	A314359	COPPER	0		BDL	mg/L		
SPI02	Q950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	Q956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	Q956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	Q956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	Q956457	NA	COPPER			< 0.008	mg/L		
LCS	Q950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	Q956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	Q956451	NA	COPPER			< 0.008	mg/L		
CDL01	Q956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	Q956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q950793	A314359	IRON	0		BDL	mg/L		
SPI02	Q950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	Q956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	Q956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	Q956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	Q956457	NA	IRON			< 0.01	mg/L		
LCS	Q950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	Q950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	Q956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	Q956451	NA	IRON			< 0.01	mg/L		
ICS-A	Q956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314360		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M105.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	
CCV	0957722	INORGANIC	ARSENIC	.1		0.0924	mg/L	92	
BLA01	0957720	NA	ARSENIC			< 0.002	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222655

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314360		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	0957722	INORGANIC	SELENIUM	.1		0.0949	mg/L	95	
BLA01	0957720	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	
CCV	0957722	INORGANIC	THALLIUM	.1		0.0932	mg/L	93	
BLA01	0957720	NA	THALLIUM			< 0.004	mg/L		

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314360		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6473J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	[illegible]
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	[illegible]
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLOROBENZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953863	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104.3	[illegible] 2
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	[illegible]
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314360		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >02938 Run: R222791

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPI02	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPI02	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPI02	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPI02	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPI02	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPI02	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPI02	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPI02	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPI02	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPS02	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.[illegible]
DPS02	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPS02	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	[illegible]
DPS02	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	[illegible].1
DPS02	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPS02	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.[illegible]
DPS02	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.4
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960260		See Attached Report g0284b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314360		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SP102	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SP102	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SP102	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SP102	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SP102	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SP102	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314360

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314360		See Certificate of Analysis						

Notes

BDL	*Below Detection Limit*
<	*Less Than Lower Detection Limit*

Quality Assurance Officer: N. Hammerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314361
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 13:20

Sample Description

SAMPLE ID: SW-061594-WP-096
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES Analysis Date: 29-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 30-JUN-94 File ID: 1156 Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	0950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	0956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	0950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	0950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	0956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	0950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	0950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	0956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	0956457	NA	CADMIUM			< 0.002	mg/L		
LCS	0950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	0950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	0956457	NA	CALCIUM			< 0.08	mg/L		
LCS	0950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	0950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	0956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	0956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	0950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	0950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COBALT	0		BDL	mg/L		
SPI02	0950791	A314359	COBALT	0	0.500	0.466	mg/L	93	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	0956457	NA	COBALT			.011	mg/L		
LCS	0950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	0950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	0956451	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	COPPER	0		BDL	mg/L		
SPI02	0950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	0956457	NA	COPPER			< 0.008	mg/L		
LCS	0950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	0950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	0956451	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	0950793	A314359	IRON	0		BDL	mg/L		
SPI02	0950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	0956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	0956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	0956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	0956457	NA	IRON			< 0.01	mg/L		
LCS	0950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	0950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	0956451	NA	IRON			< 0.01	mg/L		
ICS-A	0956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314361		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	
CCV	0957722	INORGANIC	ARSENIC	.1		0.0924	mg/L	92	
BLA01	0957720	NA	ARSENIC			< 0.002	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222655

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957985		LEAD	.1		.0982	mg/L	98.2
BLA01	0957986		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314361		See Certificate of Analysis					
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
CDL01	0958011		LEAD	.006		.0063	mg/L	105

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	0957722	INORGANIC	SELENIUM	.1		0.0949	mg/L	95	
BLA01	0957720	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222615

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	
CCV	0957722	INORGANIC	THALLIUM	.1		0.0932	mg/L	93	
BLA01	0957720	NA	THALLIUM			< 0.004	mg/L		

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314361		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 24-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6474J Run: R221892

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0953860		See Attached Report g6460j.ind						
BLA01	0953861		See Attached Report g6461j.ind						
LCS01	0953862	GCMS#10	BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	CARBON TETRACHLORIDE	4		3.71	ug/L	92.8	
LCS01	0953862	GCMS#10	1,2-DICHLOROETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHENE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.82	ug/L	95.5	
LCS01	0953862	GCMS#10	TRICHLOROETHENE	4		3.83	ug/L	95.8	
LCS01	0953862	GCMS#10	VINYL CHLORIDE	4		4.03	ug/L	100.8	
LCS01	0953862	GCMS#10	BROMODICHLOROMETHANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	BROMOFORM	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	BROMOMETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	CHLOROBENZENE	4		3.9	ug/L	97.5	
LCS01	0953862	GCMS#10	DIBROMOCHLOROMETHANE	4		3.79	ug/L	94.8	
LCS01	0953862	GCMS#10	CHLOROETHANE	4		4	ug/L	100	
LCS01	0953862	GCMS#10	CHLOROFORM	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CHLOROMETHANE	4		4.17	ug/L	104.3	
LCS01	0953862	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		3.97	ug/L	99.3	
LCS01	0953862	GCMS#10	CIS-1,2-DICHLOROETHENE	4		3.95	ug/L	98.8	
LCS01	0953862	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.13	ug/L	103.3	
LCS01	0953862	GCMS#10	1,1-DICHLOROETHANE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	1,2-DICHLOROPROPANE	4		3.87	ug/L	96.8	
LCS01	0953862	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.84	ug/L	96	
LCS01	0953862	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.89	ug/L	97.3	
LCS01	0953862	GCMS#10	ETHYL BENZENE	4		3.85	ug/L	96.3	
LCS01	0953862	GCMS#10	STYRENE	4		3.91	ug/L	97.8	
LCS01	0953862	GCMS#10	1,1,2-TRICHLOROETHANE	4		3.99	ug/L	99.8	
LCS01	0953862	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		4.04	ug/L	101	
LCS01	0953862	GCMS#10	TETRACHLOROETHENE	4		3.81	ug/L	95.3	
LCS01	0953862	GCMS#10	TOLUENE	4		3.88	ug/L	97	
LCS01	0953862	GCMS#10	ACETONE	4		3.78	ug/L	94.5	
LCS01	0953862	GCMS#10	CARBON DISULFIDE	4		3.92	ug/L	98	
LCS01	0953862	GCMS#10	4-METHYL-2-PENTANONE	4		3.5	ug/L	87.5	
LCS01	0953862	GCMS#10	2-HEXANONE	4		3.99	ug/L	99.8	
DLCS1	0953863	GCMS#10	BENZENE	4		4.03	ug/L	100.8	4.6
DLCS1	0953863	GCMS#10	CARBON TETRACHLORIDE	4		3.77	ug/L	94.3	1.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DLCS1	Q953863	GCMS#10	1,2-DICHLOROETHANE	4		4.08	ug/L	102	5.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHENE	4		4.1	ug/L	102.5	2.7
DLCS1	Q953863	GCMS#10	1,1,1-TRICHLOROETHANE	4		3.9	ug/L	97.5	
DLCS1	Q953863	GCMS#10	TRICHLOROETHENE	4		3.97	ug/L	99.3	
DLCS1	Q953863	GCMS#10	VINYL CHLORIDE	4		4.2	ug/L	105	4.1
DLCS1	Q953863	GCMS#10	BROMODICHLOROMETHANE	4		3.98	ug/L	99.5	2.8
DLCS1	Q953863	GCMS#10	BROMOFORM	4		3.82	ug/L	95.5	1.6
DLCS1	Q953863	GCMS#10	BROMOMETHANE	4		4.14	ug/L	103.5	2.4
DLCS1	Q953863	GCMS#10	CHLOROBENZENE	4		4.02	ug/L	100.5	3
DLCS1	Q953863	GCMS#10	DIBROMOCHLOROMETHANE	4		3.88	ug/L	97	2.3
DLCS1	Q953863	GCMS#10	CHLOROETHANE	4		4.05	ug/L	101.3	1.3
DLCS1	Q953863	GCMS#10	CHLOROFORM	4		4.05	ug/L	101.3	2
DLCS1	Q953863	GCMS#10	CHLOROMETHANE	4		4.45	ug/L	111.3	6.5
DLCS1	Q953863	GCMS#10	TRANS-1,2-DICHLOROETHENE	4		4.09	ug/L	102.3	3
DLCS1	Q953863	GCMS#10	CIS-1,2-DICHLOROETHENE	4		4.13	ug/L	103.3	4.5
DLCS1	Q953863	GCMS#10	DICHLOROMETHANE (METHYLENE CHLORIDE)	4		4.62	ug/L	115.5	11.2
DLCS1	Q953863	GCMS#10	1,1-DICHLOROETHANE	4		4.07	ug/L	101.8	3.8
DLCS1	Q953863	GCMS#10	1,2-DICHLOROPROPANE	4		3.99	ug/L	99.8	3.1
DLCS1	Q953863	GCMS#10	CIS-1,3-DICHLOROPROPENE	4		3.9	ug/L	97.5	1.6
DLCS1	Q953863	GCMS#10	TRANS-1,3-DICHLOROPROPENE	4		3.93	ug/L	98.3	1
DLCS1	Q953863	GCMS#10	ETHYL BENZENE	4		3.84	ug/L	96	.3
DLCS1	Q953863	GCMS#10	STYRENE	4		4.01	ug/L	100.3	2.5
DLCS1	Q953863	GCMS#10	1,1,2-TRICHLOROETHANE	4		4.18	ug/L	104.5	4.6
DLCS1	Q953863	GCMS#10	1,1,2,2-TETRACHLOROETHANE	4		3.94	ug/L	98.5	2.5
DLCS1	Q953863	GCMS#10	TETRACHLOROETHENE	4		3.89	ug/L	97.3	2.1
DLCS1	Q953863	GCMS#10	TOLUENE	4		3.91	ug/L	97.8	.8
DLCS1	Q953863	GCMS#10	ACETONE	4		4.88	ug/L	122	25.4
DLCS1	Q953863	GCMS#10	CARBON DISULFIDE	4		4.17	ug/L	104	
DLCS1	Q953863	GCMS#10	4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q953863	GCMS#10	2-HEXANONE	4		4.78	ug/L	119.5	18
SAMPLE	A314361		See Certificate of Analysis						

Comments

*Q953862 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q953863 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >02948 Run: R222791

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q943003	A313895	PHENOL	160	100	195	ug/L	35	
SPI02	Q943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPI02	Q943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPI02	Q943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPI02	Q943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPI02	Q943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPI02	Q943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPI02	Q943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPI02	Q943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPI02	Q943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPS02	Q943004	A313895	PHENOL	160	100	200	ug/L	40	13.3
DPS02	Q943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPS02	Q943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	
DPS02	Q943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	5.1
DPS02	Q943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPS02	Q943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.6
DPS02	Q943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	2

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	84.4
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960260		See Attached Report g0284b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314361		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SPI02	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314361

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314361		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Zimmerman

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314362
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 15:15

Sample Description

SAMPLE ID: SW-061594-WP-099
DESCRIPTION: SURFACE WATER
PROJECT NAME: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 29-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 30-JUN-94 File ID: 1156 Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0950793	A314359	ALUMINUM	0		BDL	mg/L		
SPI02	0950791	A314359	ALUMINUM	0	2.00	1.90	mg/L	95	
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956456	INORGANIC	ALUMINUM	5.00		4.99	mg/L	100	
BLA01	0956457	NA	ALUMINUM			< 0.02	mg/L		
LCS	0950789	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	0950790	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	0956451	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N102.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ANTIMONY	0.400		0.410	mg/L	103	
DUP02	0950793	A314359	ANTIMONY	0		BDL	mg/L		
SPI02	0950791	A314359	ANTIMONY	0	0.500	0.433	mg/L	87	
CDL01	0956434	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0956456	INORGANIC	ANTIMONY	1.00		0.993	mg/L	99	
BLA01	0956457	NA	ANTIMONY			< 0.012	mg/L		
LCS	0950789	SPEX	ANTIMONY	5.00		4.28	mg/L	86	
BLA02	0950790	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0956451	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0956523	PERKIN ELM	ANTIMONY	0.120		0.124	mg/L	103	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0950793	A314359	BARIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BARIUM	0	2.00	1.88	mg/L	94	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956456	INORGANIC	BARIUM	5.00		4.93	mg/L	99	
BLA01	0956457	NA	BARIUM			< 0.004	mg/L		
LCS	0950789	SPEX	BARIUM	20.0		18.8	mg/L	94	
BLA02	0950790	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0950793	A314359	BERYLLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	BERYLLIUM	0	0.050	0.0459	mg/L	92	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956456	INORGANIC	BERYLLIUM	5.00		4.84	mg/L	97	
BLA01	0956457	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0950789	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	0950790	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	BERYLLIUM	5.00		4.91	mg/L	98	
BLA01	0956451	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0950793	A314359	CADMIUM	0		BDL	mg/L		
SPI02	0950791	A314359	CADMIUM	0	0.050	0.0448	mg/L	90	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	Q956456	INORGANIC	CADMIUM	5.00		4.85	mg/L	97	
BLA01	Q956457	NA	CADMIUM			< 0.002	mg/L		
LCS	Q950789	SPEX	CADMIUM	0.500		0.451	mg/L	90	
BLA02	Q950795	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	Q956451	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	Q956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	Q950793	A314359	CALCIUM	0		BDL	mg/L		
SPI02	Q950791	A314359	CALCIUM	0	100	93.0	mg/L	93	
ICS-A	Q956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	Q956456	INORGANIC	CALCIUM	50.0		48.6	mg/L	97	
BLA01	Q956457	NA	CALCIUM			< 0.08	mg/L		
LCS	Q950789	SPEX	CALCIUM	100		89.8	mg/L	90	
BLA02	Q950790	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q956451	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	Q950793	A314359	CHROMIUM	0		BDL	mg/L		
SPI02	Q950791	A314359	CHROMIUM	0	0.200	0.187	mg/L	94	
CDL01	Q956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	Q956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q956456	INORGANIC	CHROMIUM	5.00		4.88	mg/L	98	
BLA01	Q956457	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q950789	SPEX	CHROMIUM	2.00		1.86	mg/L	93	
BLA02	Q950790	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	Q956451	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	Q956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	Q950793	A314359	COBALT	0		BDL	mg/L		
SPI02	Q950791	A314359	COBALT	0	0.500	0.466	mg/L	93	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CDL01	Q956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	Q956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q956456	INORGANIC	COBALT	5.00		4.85	mg/L	97	
BLA01	Q956457	NA	COBALT			.011	mg/L		
LCS	Q950789	SPEX	COBALT	5.00		4.55	mg/L	91	
BLA02	Q950790	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	COBALT	5.00		4.91	mg/L	98	
BLA01	Q956451	NA	COBALT			< 0.004	mg/L		
CDL01	Q956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	Q956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	Q950793	A314359	COPPER	0		BDL	mg/L		
SPI02	Q950791	A314359	COPPER	0	0.250	0.238	mg/L	95	
CDL01	Q956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	Q956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	Q956456	INORGANIC	COPPER	5.00		4.93	mg/L	99	
BLA01	Q956457	NA	COPPER			< 0.008	mg/L		
LCS	Q950789	SPEX	COPPER	2.50		2.32	mg/L	93	
BLA02	Q950790	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	Q956451	NA	COPPER			< 0.008	mg/L		
CDL01	Q956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	Q956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	IRON	0.400		0.418	mg/L	105	
DUP02	Q950793	A314359	IRON	0		BDL	mg/L		
SPI02	Q950791	A314359	IRON	0	1.00	0.942	mg/L	94	
CDL01	Q956422	INORGANIC	IRON	10		9.85	mg/L	99	
ICS-A	Q956435	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	Q956456	INORGANIC	IRON	5.00		4.88	mg/L	98	
BLA01	Q956457	NA	IRON			< 0.01	mg/L		
LCS	Q950789	SPEX	IRON	10.0		9.25	mg/L	93	
BLA02	Q950790	NA	IRON			< 0.01	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	Q956450	INORGANIC	IRON	5.00		4.96	mg/L	99	
BLA01	Q956451	NA	IRON			< 0.01	mg/L		
ICS-A	Q956524	PERKIN ELM	IRON	200		193.	mg/L	97	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0950793	A314359	MAGNESIUM	0		BDL	mg/L		
SPI02	0950791	A314359	MAGNESIUM	0	100	92.7	mg/L	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956456	INORGANIC	MAGNESIUM	50.0		48.5	mg/L	97	
BLA01	0956457	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0950789	SPEX	MAGNESIUM	100		89.4	mg/L	89	
BLA02	0950790	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	MAGNESIUM	50.0		48.9	mg/L	98	
BLA01	0956451	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0950793	A314359	MANGANESE	0		BDL	mg/L		
SPI02	0950791	A314359	MANGANESE	0	0.500	0.462	mg/L	92	
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956456	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0956457	NA	MANGANESE			< 0.004	mg/L		
LCS	0950789	SPEX	MANGANESE	5.00		4.57	mg/L	91	
BLA02	0950790	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	
BLA01	0956451	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0950793	A314359	NICKEL	.0134		BDL	mg/L		29
SPI02	0950791	A314359	NICKEL	0.0134	0.500	0.453	mg/L	88	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956456	INORGANIC	NICKEL	5.00		4.80	mg/L	96	
BLA01	0956457	NA	NICKEL			.0119	mg/L		
LCS	0950789	SPEX	NICKEL	5.00		4.48	mg/L	90	
BLA02	0950790	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	0956451	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102
DUP02	0950793	A314359	POTASSIUM	0		BDL	mg/L	
SPI02	0950791	A314359	POTASSIUM	0	100	97.5	mg/L	98
CCV	0956456	INORGANIC	POTASSIUM	50.0		50.2	mg/L	100
BLA01	0956457	NA	POTASSIUM			< 0.08	mg/L	
LCS	0950789	SPEX	POTASSIUM	100		94.1	mg/L	94
BLA02	0950790	NA	POTASSIUM			< 0.08	mg/L	
SAMPLE	A314362		See Certificate of Analysis					
CCV	0956450	INORGANIC	POTASSIUM	50.0		50.6	mg/L	101
BLA01	0956451	NA	POTASSIUM			< 0.08	mg/L	

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: N130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0950793	A314359	SILVER	0.0127		0.0135	mg/L		6
SPI02	0950791	A314359	SILVER	0.0127	0.050	0.0659	mg/L	106	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956456	INORGANIC	SILVER	1.00		1.00	mg/L	100	
BLA01	0956457	NA	SILVER			.0106	mg/L		
LCS	0950789	SPEX	SILVER	0.500		0.458	mg/L	92	
BLA02	0950790	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956451	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: N131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0950793	A314359	SODIUM	0.383		0.401	mg/L		5
SPI02	0950791	A314359	SODIUM	0.383	100	96.9	mg/L	97	
CCV	0960791	INORGANIC	SODIUM	50		50.6	mg/L	101	
BLA01	0960799	NA	SODIUM			< 0.08	mg/L		
LCS	0950789	SPEX	SODIUM	100		93.7	mg/L	94	
BLA02	0950790	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0960801	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960802	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: RZZZ271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0950793	A314359	VANADIUM	0		BDL	mg/L		
SPI02	0950791	A314359	VANADIUM	0	0.500	0.463	mg/L	93	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956456	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	0956457	NA	VANADIUM			< 0.004	mg/L		
LCS	0950789	SPEX	VANADIUM	5.00		4.61	mg/L	92	
BLA02	0950790	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	VANADIUM	5.00		4.98	mg/L	100	
BLA01	0956451	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: RZZZ271

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0950793	A314359	ZINC	0.0202		0.0202	mg/L		0
SPI02	0950791	A314359	ZINC	0.0202	0.500	0.478	mg/L	92	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956456	INORGANIC	ZINC	5.00		4.86	mg/L	97	
BLA01	0956457	NA	ZINC			< 0.008	mg/L		
LCS	0950789	SPEX	ZINC	5.00		4.56	mg/L	91	
BLA02	0950790	NA	ZINC			< 0.008	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0956450	INORGANIC	ZINC	5.00		4.93	mg/L	99	
BLA01	0956451	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: RZZZ415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	ARSENIC	.04		.0346	mg/L	87	
DUP02	0950793	A314359	ARSENIC	0		BDL	mg/L		
SPI02	0950791	A314359	ARSENIC	0	2	1.86	mg/L	93	
CDL01	0957742	INORGANIC	ARSENIC	.5		0.499	mg/L	100	
CCV	0957725	INORGANIC	ARSENIC	.1		0.0915	mg/L	92	
BLA01	0957724	NA	ARSENIC			< 0.002	mg/L		
LCS	0950794	INORGANIC	ARSENIC	.5		0.453	mg/L	91	
BLA02	0950795	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	ARSENIC	.02		0.0162	mg/L	81	
CCV	0957722	INORGANIC	ARSENIC	.1		0.0924	mg/L	92	
BLA01	0957720	NA	ARSENIC			< 0.002	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: 000788 Run: R222455

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0957972		LEAD	.04		.0387	mg/L	96.8
DUP02	0952852	A314359	LEAD	0		BDL	mg/L	
SPI02	0952850	A314359	LEAD	0	.5	.495	mg/L	99
CDL01	0957974		LEAD	.006		.0065	mg/L	108.3
CCV	0957999		LEAD	.1		.0979	mg/L	97.9
BLA01	0958000		LEAD			< .003	mg/L	
LCS	0952848		LEAD	.5		.473	mg/L	94.6
BLA02	0952849		LEAD			< .003	mg/L	
SAMPLE	A314362		See Certificate of Analysis					
CDL01	0958011		LEAD	.006		.0063	mg/L	105
CCV	0958014		LEAD	.1		.0959	mg/L	95.9
BLA01	0958015		LEAD			< .003	mg/L	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	SELENIUM	.04		0.0392	mg/L	98	
DUP02	0950793	A314359	SELENIUM	0		BDL	mg/L		
SPI02	0950791	A314359	SELENIUM	0	2	1.89	mg/L	95	
CDL01	0957742	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0957725	INORGANIC	SELENIUM	.1		0.0947	mg/L	95	
BLA01	0957724	NA	SELENIUM			< 0.002	mg/L		
LCS	0950794	INORGANIC	SELENIUM	.5		0.455	mg/L	91	
BLA02	0950795	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	0957722	INORGANIC	SELENIUM	.1		0.0949	mg/L	95	
BLA01	0957720	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 06-JUL-94 File ID: Run: R222415

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957744	PERKIN-ELM	THALLIUM	.04		0.0374	mg/L	94	
DUP02	0950793	A314359	THALLIUM	0		BDL	mg/L		
SPI02	0950791	A314359	THALLIUM	0	3.00	2.86	mg/L	95	
CDL01	0957742	INORGANIC	THALLIUM	.5		0.498	mg/L	100	
CCV	0957725	INORGANIC	THALLIUM	.1		0.0948	mg/L	95	
BLA01	0957724	NA	THALLIUM			< 0.004	mg/L		
LCS	0950794	INORGANIC	THALLIUM	.5		0.452	mg/L	90	
BLA02	0950795	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CDL01	0957723	PERKIN-ELM	THALLIUM	.02		0.0212	mg/L	106	
CCV	0957722	INORGANIC	THALLIUM	.1		0.0932	mg/L	93	
BLA01	0957720	NA	THALLIUM			< 0.004	mg/L		

MERCURY CVAA SW846-7470

Analyst : K. BUCKNER Analysis Date: 28-JUN-94 Instrument: CVAA Test: M120.1.0
Reviewer: R. BYERS Review Date: 29-JUN-94 File ID: 000745 Run: R221856

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0953638		MERCURY	.00147		.0016	mg/L	108.8	
DUP02	0949669	A314356	MERCURY	0		BDL	mg/L		
SPI02	0949667	A314356	MERCURY	0	.001	.00101	mg/L	101	
CDL01	0953642		MERCURY	.0002		.000235	mg/L	117.5	
CCV	0953655		MERCURY	.003		.00272	mg/L	90.7	
BLA01	0953656		MERCURY			< .0002	mg/L		
LCS	0949665		MERCURY	.003		.00261	mg/L	87	
BLA02	0949666		MERCURY			< .0002	mg/L		
SAMPLE	A314362		See Certificate of Analysis						
CCV	0953657		MERCURY	.003		.00307	mg/L	102.3	
BLA01	0953658		MERCURY			< .00008	mg/L		
CDL01	0953700		MERCURY	.0002		.000182	mg/L	91	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHARP Analysis Date: 25-JUN-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: A. BRADBURN Review Date: 29-JUN-94 File ID: >6490J Run: R221894

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0953901	A314356	BENZENE	0	10	10.1	ug/L	101	
SPI01	0953901	A314356	CARBON TETRACHLORIDE	0	10	9.32	ug/L	93.2	
SPI01	0953901	A314356	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	0953901	A314356	1,1-DICHLOROETHENE	0	10	10.1	ug/L	101	
SPI01	0953901	A314356	1,1,1-TRICHLOROETHANE	0	10	9.39	ug/L	93.9	
SPI01	0953901	A314356	TRICHLOROETHENE	0	10	9.76	ug/L	97.6	
SPI01	0953901	A314356	VINYL CHLORIDE	0	10	9.98	ug/L	99.8	
SPI01	0953901	A314356	BROMODICHLOROMETHANE	0	10	10.5	ug/L	105	
SPI01	0953901	A314356	BROMOFORM	0	10	10.5	ug/L	105	
SPI01	0953901	A314356	BROMOMETHANE	0	10	9.68	ug/L	96.8	
SPI01	0953901	A314356	CHLOROBENZENE	0	10	10.1	ug/L	101	
SPI01	0953901	A314356	DIBROMOCHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	0953901	A314356	CHLOROETHANE	0	10	9.79	ug/L	97.9	
SPI01	0953901	A314356	CHLOROFORM	0	10	10.1	ug/L	101	
SPI01	0953901	A314356	CHLOROMETHANE	0	10	10.2	ug/L	102	
SPI01	0953901	A314356	TRANS-1,2-DICHLOROETHENE	0	10	10	ug/L	100	
SPI01	0953901	A314356	CIS-1,2-DICHLOROETHENE	0	10	10.5	ug/L	105	
SPI01	0953901	A314356	DICHLOROMETHANE (METHYLENE CHLORIDE)	0	10	10.7	ug/L	107	
SPI01	0953901	A314356	1,1-DICHLOROETHANE	0	10	10.1	ug/L	101	
SPI01	0953901	A314356	1,2-DICHLOROPROPANE	0	10	10.7	ug/L	107	
SPI01	0953901	A314356	CIS-1,3-DICHLOROPROPENE	0	10	10.7	ug/L	107	
SPI01	0953901	A314356	TRANS-1,3-DICHLOROPROPENE	0	10	10.8	ug/L	108	
SPI01	0953901	A314356	ETHYL BENZENE	0	10	9.36	ug/L	93.6	
SPI01	0953901	A314356	STYRENE	0	10	10.2	ug/L	102	
SPI01	0953901	A314356	1,1,2-TRICHLOROETHANE	0	10	11.2	ug/L	112	
SPI01	0953901	A314356	1,1,2,2-TETRACHLOROETHANE	0	10	10.5	ug/L	105	
SPI01	0953901	A314356	TETRACHLOROETHENE	0	10	9.31	ug/L	93.1	
SPI01	0953901	A314356	TOLUENE	0	10	10	ug/L	100	
SPI01	0953901	A314356	ACETONE	0	10	* 19.8	ug/L	198	
SPI01	0953901	A314356	CARBON DISULFIDE	0	10	9.84	ug/L	98.4	
SPI01	0953901	A314356	4-METHYL-2-PENTANONE	0	10	9.61	ug/L	96.1	
SPI01	0953901	A314356	2-HEXANONE	0	10	12.3	ug/L	123	
CCV	0953897		See Attached Report g6480j.ind						
BLA01	0953898		See Attached Report g6481j.ind						
LCS01	0953899		ACETONE	4		4.09	ug/L	102.3	
DLCS1	0953900		ACETONE	4		4.51	ug/L	112.8	9.8

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A314362		See Certificate of Analysis						

Comments

Q953901 NOTE: * OUTSIDE ADVISORY LIMITS
Q953899 NOTE: * OUTSIDE ADVISORY LIMITS
Q953900 NOTE: * OUTSIDE ADVISORY LIMITS

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 08-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 08-JUL-94 File ID: >03028 Run: R222796

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0943003	A313895	PHENOL	160	100	195	ug/L	35	
SPI02	0943003	A313895	2-CHLOROPHENOL	0	100	86.9	ug/L	86.9	
SPI02	0943003	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	91.9	ug/L	91.9	
SPI02	0943003	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	121	ug/L	121	
SPI02	0943003	A313895	1,2,4-TRICHLOROBENZENE	0	100	94.7	ug/L	94.7	
SPI02	0943003	A313895	4-CHLORO-3-METHYLPHENOL	0	100	85	ug/L	85	
SPI02	0943003	A313895	ACENAPHTHENE	24	100	124	ug/L	100	
SPI02	0943003	A313895	2,4-DINITROTOLUENE	0	100	98.2	ug/L	98.2	
SPI02	0943003	A313895	PENTACHLOROPHENOL	0	100	129	ug/L	129	
SPI02	0943003	A313895	PYRENE	0	100	96.6	ug/L	96.6	
DPS02	0943004	A313895	PHENOL	160	100	200	ug/L	40	13.3
DPS02	0943004	A313895	2-CHLOROPHENOL	0	100	88.1	ug/L	88.1	1.4
DPS02	0943004	A313895	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	92.6	ug/L	92.6	.8
DPS02	0943004	A313895	N-NITROSO-DI-N-PROPYLAMINE	0	100	115	ug/L	115	5.1
DPS02	0943004	A313895	1,2,4-TRICHLOROBENZENE	0	100	97.7	ug/L	97.7	3.1
DPS02	0943004	A313895	4-CHLORO-3-METHYLPHENOL	0	100	63.7	ug/L	63.7	28.6
DPS02	0943004	A313895	ACENAPHTHENE	24	100	122	ug/L	98	[illegible]
DPS02	0943004	A313895	2,4-DINITROTOLUENE	0	100	39.9	ug/L	39.9	[illegible]
DPS02	0943004	A313895	PENTACHLOROPHENOL	0	100	118	ug/L	118	8.9
DPS02	0943004	A313895	PYRENE	0	100	103	ug/L	103	6.4
CCV	0960292		See Attached Report g0300b.ind						
BLA02	0950496		See Attached Report g0113b.ind						
SAMPLE	A314362		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 24-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5050 Run: R221576

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0946013	A314356	GAMMA-BHC (LINDANE)	0	.0005	.0005	mg/L	100	5.8
DPS02	0946013	A314356	HEPTACHLOR	0	.0005	.00049	mg/L	98	2
DPS02	0946013	A314356	ALDRIN	0	.0005	.00052	mg/L	104	1.9
DPS02	0946013	A314356	DIELDRIN	0	.001	.001	mg/L	100	0
DPS02	0946013	A314356	ENDRIN	0	.001	.0011	mg/L	110	8.7
DPS02	0946013	A314356	4,4'-DDT	0	.001	.00097	mg/L	97	3
SPI02	0946012	A314356	GAMMA-BHC (LINDANE)	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	HEPTACHLOR	0	.0005	.0005	mg/L	100	
SPI02	0946012	A314356	ALDRIN	0	.0005	.00053	mg/L	106	
SPI02	0946012	A314356	DIELDRIN	0	.001	.001	mg/L	100	
SPI02	0946012	A314356	ENDRIN	0	.001	.0012	mg/L	120	
SPI02	0946012	A314356	4,4'-DDT	0	.001	.001	mg/L	100	
BLA02	0946010		ALPHA-BHC			< .00002	mg/L		
BLA02	0946010		BETA-BHC			< .00002	mg/L		
BLA02	0946010		DELTA-BHC			< .00002	mg/L		
BLA02	0946010		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR			< .00002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0946010		ALDRIN			< .00002	mg/L		
BLA02	0946010		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	0946010		ENDOSULFAN I			< .00002	mg/L		
BLA02	0946010		DIELDRIN			< .00004	mg/L		
BLA02	0946010		4,4'-DDE			< .00004	mg/L		
BLA02	0946010		ENDRIN			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN II			< .00004	mg/L		
BLA02	0946010		4,4'-DDD			< .00004	mg/L		
BLA02	0946010		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	0946010		4,4'-DDT			< .00004	mg/L		
BLA02	0946010		METHOXYCHLOR			< .0002	mg/L		
BLA02	0946010		ENDRIN KETONE			< .00004	mg/L		
BLA02	0946010		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	0946010		TOXAPHENE			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0946010		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0946010		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0946011		GAMMA-BHC (LINDANE)	.0005		.00049	mg/L	98	
LCS	0946011		HEPTACHLOR	.0005		.0005	mg/L	100	
LCS	0946011		ALDRIN	.0005		.00054	mg/L	108	
LCS	0946011		DIELDRIN	.001		.0011	mg/L	110	
LCS	0946011		ENDRIN	.001		.0011	mg/L	110	
LCS	0946011		4,4'-DDT	.001		.001	mg/L	100	
SAMPLE	A314362		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: N. Hemmireen

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320790
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 12:00

Sample Description

SAMPLE I.D.: SW-083094-KJJ-111
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	Q999803		CYANIDE			-.001	mg/L		
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	Q970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	Q970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	Q970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320790		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SPI01	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SPI02	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SPI01	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SPI02	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SPI01	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SPI02	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SPI02	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SPI02	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0

Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	Q991552	A320793	SELENIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	Q999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	Q999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	SELENIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	Q991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	Q999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0

Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	Q991552	A320793	THALLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	THALLIUM	0	3.00	3.06	mg/L	101	
CDL01	Q999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	Q999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	THALLIUM			< 0.004	mg/L		
LCS	Q991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	Q991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	Q999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0

Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997748	A320790	MERCURY	0		BDL	mg/L		
SPI02	Q997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	Q101469		MERCURY			< .0002	mg/L		
LCS	Q997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	Q997745		MERCURY			< .0002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	Q101475		MERCURY			< .0002	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SPI02	0993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SPI02	0993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SPI02	0993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SPI02	0993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SPI02	0993144	A320257	PHENOL	0	100	57	ug/L	57	
SPI02	0993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SPI02	0993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	0993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	0993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	0993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	0993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	0993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	0993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	0993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	0993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	0993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	0993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	0993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	0993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	0993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	0993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	0993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	0993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	0993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	0993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.9
DPS02	0993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	0993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	4.6
DPS02	0993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	
DPS02	0993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	7.8
DPS02	0993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	0993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	0993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	0993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	0993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	0993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	0993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	0993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	0993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	0993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	0993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.2
DPS02	0993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	0993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	0993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.2
DPS02	0993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	0993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	0993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	0993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	0993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	0993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	0993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	0993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	0993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	[illegible]
DPS02	0993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	
DPS02	0993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	0993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	0993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M	0	100	86.7	ug/L	86.7	6.1

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >0844B Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPIO2	Q993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74	
SPIO2	Q993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7	
SPIO2	Q993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6	
SPIO2	Q993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8	
SPIO2	Q993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5	
SPIO2	Q993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8	
SPIO2	Q993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9	
SPIO2	Q993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7	
SPIO2	Q993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4	
SPIO2	Q993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1	
SPIO2	Q993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5	
SPIO2	Q993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2	
SPIO2	Q993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5	
SPIO2	Q993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82	
SPIO2	Q993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2	
SPIO2	Q993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6	
SPIO2	Q993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5	
SPIO2	Q993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7	
SPIO2	Q993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1	
SPIO2	Q993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9	
SPIO2	Q993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9	
SPIO2	Q993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7	
SPIO2	Q993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3	
SPIO2	Q993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6	
SPIO2	Q993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7	
SPIO2	Q993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8	
SPIO2	Q993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3	
SPIO2	Q993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1	
SPIO2	Q993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103	
SPIO2	Q993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4	
SPIO2	Q993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3	
SPIO2	Q993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9	
SPIO2	Q993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3	
SPIO2	Q993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	
SPIO2	Q993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6	
SPIO2	Q993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5	
SPIO2	Q993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9	
SPIO2	Q993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9	
SPIO2	Q993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1	
SPIO2	Q993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7	
SPIO2	Q993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9	
SPIO2	Q993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6	
SPIO2	Q993144	A320257	NITROBENZENE	0	100	74	ug/L	74	
SPIO2	Q993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88	
SPIO2	Q993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4	
SPIO2	Q993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2	
SPIO2	Q993144	A320257	PYRENE	0	100	81.2	ug/L	81.2	
SPIO2	Q993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5	
SPIO2	Q993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6	
SPIO2	Q993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80	
SPIO2	Q993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3	
SPIO2	Q993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5	
SPIO2	Q993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	6.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320790		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.7
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320790

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	Q997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	Q997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	Q997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	Q997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	Q997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320790		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: HiBlach

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320792
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 08:50

Sample Description

SAMPLE I.D.: SW-083094-KJJ-106
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	Q999803		CYANIDE			-.001	mg/L		
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	Q970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	Q970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	Q970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320792		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SPI01	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SPI02	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SPI01	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SPI02	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SPI01	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SPI02	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SPI02	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SPI02	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0

Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	Q991552	A320793	SELENIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	Q999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	Q999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	SELENIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	Q991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	Q999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0

Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	Q991552	A320793	THALLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	THALLIUM	0	3.00	3.04	mg/L	101	
CDL01	Q999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	Q999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	THALLIUM			< 0.004	mg/L		
LCS	Q991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	Q991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	Q999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0

Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997748	A320790	MERCURY	0		BDL	mg/L		
SPI02	Q997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	Q101469		MERCURY			< .0002	mg/L		
LCS	Q997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	Q997745		MERCURY			< .0002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	Q101475		MERCURY			< .0002	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >0845B Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
SPIO2	0993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8
SPIO2	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5
SPIO2	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8
SPIO2	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9
SPIO2	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4
SPIO2	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1
SPIO2	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5
SPIO2	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5
SPIO2	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82
SPIO2	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2
SPIO2	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6
SPIO2	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5
SPIO2	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7
SPIO2	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1
SPIO2	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9
SPIO2	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9
SPIO2	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7
SPIO2	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3
SPIO2	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6
SPIO2	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7
SPIO2	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8
SPIO2	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3
SPIO2	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1
SPIO2	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103
SPIO2	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4
SPIO2	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9
SPIO2	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8
SPIO2	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5
SPIO2	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9
SPIO2	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9
SPIO2	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1
SPIO2	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9
SPIO2	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6
SPIO2	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88
SPIO2	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4
SPIO2	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2
SPIO2	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5
SPIO2	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6
SPIO2	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80
SPIO2	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5
SPIO2	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SP102	Q993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SP102	Q993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SP102	Q993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SP102	Q993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SP102	Q993144	A320257	PHENOL	0	100	57	ug/L	57	
SP102	Q993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SP102	Q993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	Q993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	Q993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	Q993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	Q993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	Q993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	Q993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	Q993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	Q993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	Q993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	Q993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	Q993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	Q993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	Q993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	Q993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	Q993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	Q993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	Q993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	Q993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.[illegible]
DPS02	Q993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	Q993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	Q993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	Q993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	Q993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	Q993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	Q993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	Q993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	Q993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	Q993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	Q993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	Q993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	Q993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	Q993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	Q993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.[illegible]
DPS02	Q993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	Q993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	Q993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.[illegible]
DPS02	Q993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	Q993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	Q993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	Q993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	Q993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	Q993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	Q993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	Q993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	Q993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	Q993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	Q993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	Q993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	Q993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	86.7	ug/L	86.7	6.1

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	6.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320792		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: Q305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.7
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	Q997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	Q997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	Q997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	Q997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	Q997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320792		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: HWBusch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320793
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 11:15

Sample Description

SAMPLE I.D.: SW-083094-KJJ-110
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	Q999803		CYANIDE			-.001	mg/L		
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	Q970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	Q970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	Q970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320793		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SPI01	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SPI02	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SPI01	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SPI02	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SP101	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SP102	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SP102	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SP102	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	Q991552	A320793	SELENIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	Q999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	Q999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	SELENIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	Q991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	Q999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	Q991552	A320793	THALLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	THALLIUM	0	3.00	3.04	mg/L	101	
CDL01	Q999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	Q999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	THALLIUM			< 0.004	mg/L		
LCS	Q991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	Q991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	Q999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997748	A320790	MERCURY	0		BDL	mg/L		
SPI02	Q997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	Q101469		MERCURY			< .0002	mg/L		
LCS	Q997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	Q997745		MERCURY			< .0002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	Q101475		MERCURY			< .0002	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >08468 Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
SPIO2	0993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8
SPIO2	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5
SPIO2	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8
SPIO2	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9
SPIO2	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4
SPIO2	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1
SPIO2	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5
SPIO2	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5
SPIO2	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82
SPIO2	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2
SPIO2	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6
SPIO2	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5
SPIO2	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7
SPIO2	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1
SPIO2	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9
SPIO2	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9
SPIO2	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7
SPIO2	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3
SPIO2	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6
SPIO2	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7
SPIO2	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8
SPIO2	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3
SPIO2	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1
SPIO2	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103
SPIO2	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4
SPIO2	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9
SPIO2	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8
SPIO2	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5
SPIO2	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9
SPIO2	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9
SPIO2	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1
SPIO2	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9
SPIO2	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6
SPIO2	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88
SPIO2	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4
SPIO2	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2
SPIO2	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5
SPIO2	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6
SPIO2	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80
SPIO2	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5
SPIO2	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6

QC Type	Identifier	Source	Parameter	True/Samol	Spike Val	Observed	Units	% Rec	RPD
SP102	Q993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SP102	Q993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SP102	Q993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SP102	Q993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SP102	Q993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SP102	Q993144	A320257	PHENOL	0	100	57	ug/L	57	
SP102	Q993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SP102	Q993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	Q993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	Q993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	Q993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	Q993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	Q993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	Q993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	Q993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	Q993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	Q993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	Q993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	Q993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	Q993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	Q993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	Q993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	Q993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	Q993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	Q993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	Q993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.9
DPS02	Q993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	Q993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	Q993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	Q993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	Q993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	Q993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	Q993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	Q993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	Q993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	Q993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	Q993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	Q993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	Q993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	Q993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	Q993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.2
DPS02	Q993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	Q993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	Q993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.2
DPS02	Q993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	Q993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	Q993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	Q993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	Q993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	Q993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	Q993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	Q993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	Q993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	Q993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	Q993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	Q993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	Q993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	86.7	ug/L	86.7	6.1

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	4.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	4
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	5.9
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320793		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.[illegible]
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	Q997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	Q997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	Q997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	Q997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	Q997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320793		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: H.A. Busch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320964
	Complete	PO Number
	26-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 17:35

Sample Description

SAMPLE I.D.: SW-083094-KJJ-114
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	0999823		CYANIDE	.205		.202	mg/L	98.5	
DUP02	0999807	A320790	CYANIDE	0		BDL	mg/L		
SPI02	0999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
CDL01	0999804		CYANIDE	.005		.0038	mg/L	76	
CCV	0999809		CYANIDE	.1		.101	mg/L	101	
BLA01	0999810		CYANIDE			0	mg/L		
BLA02	0999806		CYANIDE			0	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	0999819		CYANIDE	.1		.098	mg/L	98	
BLA01	0999820		CYANIDE			-.001	mg/L		
LFB02	0999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP02	Q982134	A321964	ALUMINUM	18.3		19.6	mg/L		7
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105117	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105115	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q982130	SPEX	ALUMINUM	20.0		18.4	mg/L	92	
BLA02	Q982131	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	ALUMINUM	5.00		5.08	mg/L	102	
BLA01	Q105106	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q105096	PERKIN ELM	ANTIMONY	0.400		0.405	mg/L	101
DUP01	Q105275	A321929	ANTIMONY	0		BDL	mg/L	
DUP02	Q982134	A321964	ANTIMONY	0		BDL	mg/L	
SPI02	Q982132	A321964	ANTIMONY	0	0.500	0.444	mg/L	89
CDL01	Q105090	PERKIN ELM	ANTIMONY	0.120		0.111	mg/L	93
CCV	Q105117	INORGANIC	ANTIMONY	1.00		0.987	mg/L	99
BLA01	Q105115	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q982130	SPEX	ANTIMONY	5.00		4.63	mg/L	93
BLA02	Q982131	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320964		See Certificate of Analysis					
CCV	Q105107	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q105106	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q105193	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	BARIUM	2.00		2.01	mg/L	101	
DUP01	Q105275	A321929	BARIUM	0.0939		0.0937	mg/L		0
SPI01	Q105264	A321929	BARIUM	0.0939	2.00	2.32	mg/L	111	
DUP02	Q982134	A321964	BARIUM	0.171		0.175	mg/L		2
SPI02	Q982132	A321964	BARIUM	0.171	2.00	2.21	mg/L	102	
CDL01	Q105091	INORGANIC	BARIUM	10		9.98	mg/L	100	
ICS-A	Q105136	PERKIN ELM	BARIUM	0.500		0.489	mg/L	98	
CCV	Q105117	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q105115	NA	BARIUM			< 0.004	mg/L		
LCS	Q982130	SPEX	BARIUM	20.0		18.6	mg/L	93	
BLA02	Q982131	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	BARIUM	5.00		4.98	mg/L	100	
BLA01	Q105106	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q105177	PERKIN ELM	BARIUM	0.500		0.494	mg/L	99	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	BERYLLIUM	0.400		0.391	mg/L	98	
DUP01	Q105275	A321929	BERYLLIUM	0		BDL	mg/L		
SPI01	Q105264	A321929	BERYLLIUM	0	0.050	0.0545	mg/L	109	
DUP02	Q982134	A321964	BERYLLIUM	0		BDL	mg/L		
SPI02	Q982132	A321964	BERYLLIUM	0	0.050	0.0512	mg/L	102	
CDL01	Q105091	INORGANIC	BERYLLIUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	BERYLLIUM	0.500		0.471	mg/L	94	
CCV	Q105117	INORGANIC	BERYLLIUM	5.00		4.90	mg/L	98	
BLA01	Q105115	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q982130	SPEX	BERYLLIUM	0.500		0.456	mg/L	91	
BLA02	Q982131	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	BERYLLIUM	5.00		4.92	mg/L	98	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q105106	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q105193	PERKIN ELM	BERYLLIUM	0.010		0.0114	mg/L	114	
ICS-A	Q105177	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M108.3.0

Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	CADMIUM	0.400		0.402	mg/L	101	
DUP01	Q105275	A321929	CADMIUM	0		BDL	mg/L		
SPI01	Q105264	A321929	CADMIUM	0	0.050	0.0531	mg/L	106	
DUP02	Q982139	A320964	CADMIUM	0		< .001	mg/L		
SPI02	Q982137	A320964	CADMIUM	0	.05	.048	mg/L	96	
CDL01	Q105091	INORGANIC	CADMIUM	10		9.96	mg/L	100	
ICS-A	Q105136	PERKIN ELM	CADMIUM	1.00		0.914	mg/L	91	
CCV	Q105117	INORGANIC	CADMIUM	5.00		4.88	mg/L	98	
BLA01	Q105115	NA	CADMIUM			< 0.002	mg/L		
LCS	Q982135	INORGANIC	CADMIUM	.5		0.504	mg/L	101	
BLA02	Q982136	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	CADMIUM	5.00		4.91	mg/L	98	
BLA01	Q105106	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q105193	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	Q105177	PERKIN ELM	CADMIUM	1.00		0.925	mg/L	93	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M109.3.0

Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105093	SPEX	CALCIUM	100		102.	mg/L	102	
DUP01	Q105275	A321929	CALCIUM	93.6		93.3	mg/L		0
SPI01	Q105264	A321929	CALCIUM	93.6	100	196.	mg/L	102	
DUP02	Q982134	A321964	CALCIUM	63.1		63.7	mg/L		1
SPI02	Q982132	A321964	CALCIUM	63.1	100	158.	mg/L	95	
ICS-A	Q105136	PERKIN ELM	CALCIUM	500		481.	mg/L	96	
CCV	Q105117	INORGANIC	CALCIUM	50.0		50.5	mg/L	101	
BLA01	Q105115	NA	CALCIUM			< 0.08	mg/L		
LCS	Q982130	SPEX	CALCIUM	100		93.9	mg/L	94	
BLA02	Q982131	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	CALCIUM	50.0		50.8	mg/L	102	
BLA01	Q105106	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q105177	PERKIN ELM	CALCIUM	500		483.	mg/L	97	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	CHROMIUM	0.400		0.413	mg/L	103	
DUP01	Q105275	A321929	CHROMIUM	0		BDL	mg/L		
SPI01	Q105264	A321929	CHROMIUM	0	0.200	0.218	mg/L	109	
DUP02	Q982134	A321964	CHROMIUM	0.0244		0.0269	mg/L		10
SPI02	Q982132	A321964	CHROMIUM	0.0244	0.200	0.225	mg/L	100	
CDL01	Q105091	INORGANIC	CHROMIUM	10		9.95	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q105136	PERKIN ELM	CHROMIUM	0.500		0.472	mg/L	94	
CCV	Q105117	INORGANIC	CHROMIUM	5.00		4.91	mg/L	98	
BLA01	Q105115	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q982130	SPEX	CHROMIUM	2.00		1.83	mg/L	92	
BLA02	Q982131	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	CHROMIUM	5.00		4.96	mg/L	99	
BLA01	Q105106	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	CHROMIUM	0.020		0.0215	mg/L	108	
ICS-A	Q105177	PERKIN ELM	CHROMIUM	0.500		0.492	mg/L	98	

COBALT ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 14-SEP-94 Instrument: ICP — Test: M131.3.0

Reviewer: S. ENDERSEN — Review Date: 15-SEP-94 File ID: — Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q105275	A321929	COBALT	0		BDL	mg/L		
SPI01	Q105264	A321929	COBALT	0	0.500	0.544	mg/L	109	
DUP02	Q982134	A321964	COBALT	0.0217		0.0242	mg/L		11
SPI02	Q982132	A321964	COBALT	0.0217	0.500	0.521	mg/L	100	
CDL01	Q105091	INORGANIC	COBALT	10		9.95	mg/L	100	
ICS-A	Q105136	PERKIN ELM	COBALT	0.500		0.454	mg/L	91	
CCV	Q105117	INORGANIC	COBALT	5.00		4.89	mg/L	98	
BLA01	Q105115	NA	COBALT			< 0.004	mg/L		
LCS	Q982130	SPEX	COBALT	5.00		4.53	mg/L	91	
BLA02	Q982131	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	COBALT	5.00		4.93	mg/L	99	
BLA01	Q105106	NA	COBALT			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	COBALT	0.100		0.109	mg/L	109	
ICS-A	Q105177	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 14-SEP-94 Instrument: ICP — Test: M112.3.0

Reviewer: S. ENDERSEN — Review Date: 15-SEP-94 File ID: — Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	COPPER	0.400		0.401	mg/L	100	
DUP01	Q105275	A321929	COPPER	0		BDL	mg/L		
SPI01	Q105264	A321929	COPPER	0	0.250	0.264	mg/L	106	
DUP02	Q982134	A321964	COPPER	0.0475		0.0450	mg/L		5
SPI02	Q982132	A321964	COPPER	0.0475	0.250	0.301	mg/L	101	
CDL01	Q105091	INORGANIC	COPPER	10		9.91	mg/L	99	
ICS-A	Q105136	PERKIN ELM	COPPER	0.500		0.466	mg/L	93	
CCV	Q105117	INORGANIC	COPPER	5.00		4.98	mg/L	100	
BLA01	Q105115	NA	COPPER			.0243	mg/L		
LCS	Q982130	SPEX	COPPER	2.50		2.30	mg/L	92	
BLA02	Q982131	NA	COPPER			.021	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	COPPER	5.00		5.00	mg/L	100	
BLA01	Q105106	NA	COPPER			.021	mg/L		
CDL01	Q105193	PERKIN ELM	COPPER	0.050		0.0707	mg/L	141	
ICS-A	Q105177	PERKIN ELM	COPPER	0.500		0.434	mg/L	87	

IRON ICP SW846-6010A

Analyst : M. JAQ Analysis Date: 16-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 19-SEP-94 File ID: Run: R230256

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q107082	PERKIN ELM	IRON	0.400		0.395	mg/L	99	
SPI01	Q107054	A322611	IRON	0	1.00	1.08	mg/L	108	
DUP01	Q107055	A322611	IRON	0		BDL	mg/L		
DUP02	Q982134	A321964	IRON	54.8		56.0	mg/L		2
CDL01	Q107038	INORGANIC	IRON	10		9.97	mg/L	100	
ICS-A	Q107036	PERKIN ELM	IRON	200		187.	mg/L	94	
CCV	Q107044	INORGANIC	IRON	5.00		5.06	mg/L	101	
BLA01	Q107034	NA	IRON			< 0.01	mg/L		
LCS	Q982130	SPEX	IRON	10.0		9.45	mg/L	95	
BLA02	Q982131	NA	IRON			< 0.01	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q107106	INORGANIC	IRON	5.00		5.09	mg/L	102	
BLA01	Q107105	NA	IRON			< 0.01	mg/L		
ICS-A	Q107061	PERKIN ELM	IRON	200		196.	mg/L	98	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAQ Analysis Date: 14-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105093	SPEX	MAGNESIUM	100		103.	mg/L	103	
DUP01	Q105275	A321929	MAGNESIUM	17.3		17.2	mg/L		1
SPI01	Q105264	A321929	MAGNESIUM	17.3	100	128.	mg/L	111	
DUP02	Q982134	A321964	MAGNESIUM	16.9		17.2	mg/L		2
SPI02	Q982132	A321964	MAGNESIUM	16.9	100	115.	mg/L	98	
ICS-A	Q105136	PERKIN ELM	MAGNESIUM	500		497.	mg/L	99	
CCV	Q105117	INORGANIC	MAGNESIUM	50.0		51.0	mg/L	102	
BLA01	Q105115	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q982130	SPEX	MAGNESIUM	100		94.3	mg/L	94	
BLA02	Q982131	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	MAGNESIUM	50.0		51.5	mg/L	103	
BLA01	Q105106	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q105177	PERKIN ELM	MAGNESIUM	500		512.	mg/L	102	

MANGANESE ICP SW846-6010A

Analyst : M. JAQ Analysis Date: 14-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	MANGANESE	0.400		0.396	mg/L	99	
DUP01	Q105275	A321929	MANGANESE	0.189		0.188	mg/L		1
SPI01	Q105264	A321929	MANGANESE	0.189	0.500	0.718	mg/L	106	
DUP02	Q982134	A321964	MANGANESE	1.40		1.41	mg/L		1
SPI02	Q982132	A321964	MANGANESE	1.40	0.500	1.85	mg/L	90	
CDL01	Q105091	INORGANIC	MANGANESE	10		9.97	mg/L	100	
ICS-A	Q105136	PERKIN ELM	MANGANESE	0.500		0.481	mg/L	96	
CCV	Q105117	INORGANIC	MANGANESE	5.00		4.90	mg/L	98	
BLA01	Q105115	NA	MANGANESE			< 0.004	mg/L		
LCS	Q982130	SPEX	MANGANESE	5.00		4.51	mg/L	90	
BLA02	Q982131	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	MANGANESE	5.00		4.94	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP
BLA01	Q105106	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	Q105177	PERKIN ELM	MANGANESE	0.500		0.490	mg/L	98	

NICKEL ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 14-SEP-94 Instrument: ICP — Test: N122.3.0

Reviewer: S. ENDERSEN — Review Date: 15-SEP-94 File ID: — Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP
ICV01	Q105096	PERKIN ELM	NICKEL	0.400		0.404	mg/L	101	
DUP01	Q105275	A321929	NICKEL	0		BDL	mg/L		
SPI01	Q105264	A321929	NICKEL	0	0.500	0.537	mg/L	107	
DUP02	Q982134	A321964	NICKEL	0.0322		0.0330	mg/L		3
SPI02	Q982132	A321964	NICKEL	0.0322	0.500	0.526	mg/L	99	
CDL01	Q105091	INORGANIC	NICKEL	10		9.95	mg/L	100	
ICS-A	Q105136	PERKIN ELM	NICKEL	1.00		0.892	mg/L	89	
CCV	Q105117	INORGANIC	NICKEL	5.00		4.86	mg/L	97	
BLA01	Q105115	NA	NICKEL			< 0.004	mg/L		
LCS	Q982130	SPEX	NICKEL	5.00		4.51	mg/L	90	
BLA02	Q982131	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	NICKEL	5.00		4.89	mg/L	98	
BLA01	Q105106	NA	NICKEL			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	NICKEL	0.080		0.0867	mg/L	108	
ICS-A	Q105177	PERKIN ELM	NICKEL	1.00		0.925	mg/L	93	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 14-SEP-94 Instrument: ICP — Test: N126.3.0

Reviewer: S. ENDERSEN — Review Date: 15-SEP-94 File ID: — Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP(
ICV01	Q105094	PERKIN ELM	POTASSIUM	20.0		20.5	mg/L	103	
ICV01	Q105093	SPEX	POTASSIUM	100		103.	mg/L	103	
DUP01	Q105275	A321929	POTASSIUM	3.89		3.79	mg/L		3
SPI01	Q105264	A321929	POTASSIUM	3.89	100	113.	mg/L	109	
DUP02	Q982134	A321964	POTASSIUM	8.57		8.74	mg/L		2
SPI02	Q982132	A321964	POTASSIUM	8.57	100	106.	mg/L	97	
CCV	Q105117	INORGANIC	POTASSIUM	50.0		50.3	mg/L	101	
BLA01	Q105115	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q982130	SPEX	POTASSIUM	100		93.8	mg/L	94	
BLA02	Q982131	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	POTASSIUM	50.0		50.4	mg/L	101	
BLA01	Q105106	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO — Analysis Date: 14-SEP-94 Instrument: ICP — Test: N130.3.0

Reviewer: S. ENDERSEN — Review Date: 15-SEP-94 File ID: — Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	SILVER	2.00		1.99	mg/L	100	
DUP01	Q105275	A321929	SILVER	0		BDL	mg/L		
SPI01	Q105264	A321929	SILVER	0	0.050	0.0614	mg/L	123	
DUP02	Q982134	A321964	SILVER	0		BDL	mg/L		
SPI02	Q982132	A321964	SILVER	0	0.050	0.0476	mg/L	95	
CDL01	Q105091	INORGANIC	SILVER	2		1.99	mg/L	100	
ICS-A	Q105136	PERKIN ELM	SILVER	1.00		0.988	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q105117	INORGANIC	SILVER	1.00		0.996	mg/L	100	
BLA01	Q105115	NA	SILVER			< 0.004	mg/L		
LCS	Q982130	SPEX	SILVER	0.500		0.437	mg/L	87	
BLA02	Q982131	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	SILVER	1.00		0.997	mg/L	100	
BLA01	Q105106	NA	SILVER			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	SILVER	0.020		0.0145	mg/L	73	
ICS-A	Q105177	PERKIN ELM	SILVER	1.00		0.991	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	SODIUM	2		2.11	mg/L	106	
ICV01	Q105093	SPEX	SODIUM	100		105.	mg/L	105	
DUP01	Q105275	A321929	SODIUM	10.7		10.6	mg/L		1
SPI01	Q105264	A321929	SODIUM	10.7	100	122.	mg/L	111	
DUP02	Q982134	A321964	SODIUM	3.66		3.68	mg/L		1
SPI02	Q982132	A321964	SODIUM	3.66	100	104.	mg/L	100	
CCV	Q105117	INORGANIC	SODIUM	50		51.3	mg/L	103	
BLA01	Q105115	NA	SODIUM			< 0.08	mg/L		
LCS	Q982130	SPEX	SODIUM	100		96.9	mg/L	97	
BLA02	Q982131	NA	SODIUM			.268	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	SODIUM	50		51.6	mg/L	103	
BLA01	Q105106	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105096	PERKIN ELM	VANADIUM	0.400		0.396	mg/L	99	
DUP01	Q105275	A321929	VANADIUM	0		BDL	mg/L		
SPI01	Q105264	A321929	VANADIUM	0	0.500	0.540	mg/L	108	
DUP02	Q982134	A321964	VANADIUM	0.0395		0.0401	mg/L		2
SPI02	Q982132	A321964	VANADIUM	0.0395	0.500	0.539	mg/L	100	
CDL01	Q105091	INORGANIC	VANADIUM	10		9.94	mg/L	99	
ICS-A	Q105136	PERKIN ELM	VANADIUM	0.500		0.458	mg/L	92	
CCV	Q105117	INORGANIC	VANADIUM	5.00		4.91	mg/L	98	
BLA01	Q105115	NA	VANADIUM			< 0.004	mg/L		
LCS	Q982130	SPEX	VANADIUM	5.00		4.53	mg/L	91	
BLA02	Q982131	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	VANADIUM	5.00		4.94	mg/L	99	
BLA01	Q105106	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q105193	PERKIN ELM	VANADIUM	0.100		0.105	mg/L	105	
ICS-A	Q105177	PERKIN ELM	VANADIUM	0.500		0.467	mg/L	93	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q105096	PERKIN ELM	ZINC	0.400		0.395	mg/L	99	
DUP01	Q105275	A321929	ZINC	0		BDL	mg/L		
SPI01	Q105264	A321929	ZINC	0	0.500	0.561	mg/L	112	
DUP02	Q982134	A321964	ZINC	0.290		0.302	mg/L		4
SPI02	Q982132	A321964	ZINC	0.290	0.500	0.792	mg/L	100	
CDL01	Q105091	INORGANIC	ZINC	10		9.95	mg/L	100	
ICS-A	Q105136	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	
CCV	Q105117	INORGANIC	ZINC	5.00		4.97	mg/L	99	
BLA01	Q105115	NA	ZINC			< 0.008	mg/L		
LCS	Q982130	SPEX	ZINC	5.00		4.58	mg/L	92	
BLA02	Q982131	NA	ZINC			.0326	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q105107	INORGANIC	ZINC	5.00		5.00	mg/L	100	
BLA01	Q105106	NA	ZINC			< 0.008	mg/L		
CDL01	Q105193	PERKIN ELM	ZINC	0.040		0.0537	mg/L	134	
ICS-A	Q105177	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: D. CZERNY Review Date: 19-SEP-94 File ID: Run: R230272

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q107158	PERKIN-ELM	ARSENIC	.04		0.0368	mg/L	92	
DUP02	Q982139	A320964	ARSENIC	.0176		.0168	mg/L		4.7
SPI02	Q982137	A320964	ARSENIC	0	2	2	mg/L	100	
CDL01	Q107174	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q107164	INORGANIC	ARSENIC	.1		0.0965	mg/L	97	
BLA01	Q107165	NA	ARSENIC			< 0.002	mg/L		
LCS	Q982135	INORGANIC	ARSENIC	.5		0.508	mg/L	102	
BLA02	Q982136	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q107161	INORGANIC	ARSENIC	.1		0.0992	mg/L	99	
BLA01	Q107162	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q107163	PERKIN-ELM	ARSENIC	.02		0.0160	mg/L	80	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: D. CZERNY Review Date: 19-SEP-94 File ID: Run: R230272

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q107158	PERKIN-ELM	LEAD	.04		0.0408	mg/L	102	
DUP02	Q982139	A320964	LEAD	.0668		.0661	mg/L		1.1
SPI02	Q982137	A320964	LEAD	0	.5	.533	mg/L	107	
CDL01	Q107174	INORGANIC	LEAD	.5		0.502	mg/L	100	
ICS-A	Q107171	PERKIN ELM	LEAD	1		0.911	mg/L	91	
CCV	Q107164	INORGANIC	LEAD	.1		0.0996	mg/L	100	
BLA01	Q107165	NA	LEAD			< 0.002	mg/L		
LCS	Q982135	INORGANIC	LEAD	.5		0.510	mg/L	102	
BLA02	Q982136	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q107161	INORGANIC	LEAD	.1		0.0985	mg/L	99	
BLA01	Q107162	NA	LEAD			< 0.002	mg/L		
CDL01	Q107163	PERKIN-ELM	LEAD	.006		0.00635	mg/L	106	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q107155	PERKIN ELM	LEAD	1		0.886	mg/L	89	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: D. CZERNY Review Date: 19-SEP-94 File ID: Run: R230272

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q107158	PERKIN-ELM	SELENIUM	.04		0.0383	mg/L	96	
DUP02	Q982139	A320964	SELENIUM	0		< .005	mg/L		
SPI02	Q982137	A320964	SELENIUM	0	2	2.08	mg/L	104	
CDL01	Q107174	INORGANIC	SELENIUM	.5		0.500	mg/L	100	
CCV	Q107164	INORGANIC	SELENIUM	.1		0.0941	mg/L	94	
BLA01	Q107165	NA	SELENIUM			< 0.002	mg/L		
LCS	Q982135	INORGANIC	SELENIUM	.5		0.505	mg/L	101	
BLA02	Q982136	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q107161	INORGANIC	SELENIUM	.1		0.0989	mg/L	99	
BLA01	Q107162	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q107163	PERKIN-ELM	SELENIUM	.01		0.0103	mg/L	103	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: D. CZERNY Review Date: 19-SEP-94 File ID: Run: R230272

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q107158	PERKIN-ELM	THALLIUM	.04		0.0410	mg/L	103	
DUP02	Q982139	A320964	THALLIUM	0		< .01	mg/L		
SPI02	Q982137	A320964	THALLIUM	0	3	2.87	mg/L	96	
CDL01	Q107174	INORGANIC	THALLIUM	.5		0.500	mg/L	100	
CCV	Q107164	INORGANIC	THALLIUM	.1		0.0993	mg/L	99	
BLA01	Q107165	NA	THALLIUM			< 0.004	mg/L		
LCS	Q982135	INORGANIC	THALLIUM	.5		0.509	mg/L	102	
BLA02	Q982136	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q107161	INORGANIC	THALLIUM	.1		0.0991	mg/L	99	
BLA01	Q107162	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q107163	PERKIN-ELM	THALLIUM	.02		0.0202	mg/L	101	

MERCURY CVAA SW846-7470

Analyst : T. NEED, JR. Analysis Date: 09-SEP-94 Instrument: CVAA Test: M120.1.0
Reviewer: S. O'NEAL Review Date: 12-SEP-94 File ID: 001070 Run: R229561

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102919		MERCURY	.00147		.00154	mg/L	104.8	
DUP02	Q997780	A320964	MERCURY	0		BDL	mg/L		
SPI02	Q997778	A320964	MERCURY	0	.001	.00077	mg/L	77	
CDL01	Q102923		MERCURY	.0002		.000205	mg/L	102.5	
CCV	Q102951		MERCURY	.003		.00309	mg/L	103	
BLA01	Q102952		MERCURY			< .0002	mg/L		
LCS	Q997775		MERCURY	.003		.00258	mg/L	86	
BLA02	Q997777		MERCURY			< .0002	mg/L		
SAMPLE	A320964		See Certificate of Analysis						
CCV	Q102955		MERCURY	.003		.00282	mg/L	94	
BLA01	Q102956		MERCURY			< .0002	mg/L		
CDL01	Q102960		MERCURY	.0002		.000146	mg/L	73	

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: H. WILLIAMS Review Date: 16-SEP-94 File ID: >7874J Run: R230114

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106250	A320965	BENZENE	0	10	10	ug/L	100	
SPI01	Q106250	A320965	CARBON TETRACHLORIDE	0	10	9.39	ug/L	93.9	
SPI01	Q106250	A320965	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	1,1-DICHLOROETHENE	0	10	9.23	ug/L	92.3	
SPI01	Q106250	A320965	1,1,1-TRICHLOROETHANE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	TRICHLOROETHENE	0	10	9.73	ug/L	97.3	
SPI01	Q106250	A320965	VINYL CHLORIDE	0	10	9.2	ug/L	92	
SPI01	Q106250	A320965	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	BROMOFORM	0	10	9.82	ug/L	98.2	
SPI01	Q106250	A320965	BROMOMETHANE	0	10	9.13	ug/L	91.3	
SPI01	Q106250	A320965	CHLOROBENZENE	0	10	9.63	ug/L	96.3	
SPI01	Q106250	A320965	DIBROMOCHLOROMETHANE	0	10	10.1	ug/L	101	
SPI01	Q106250	A320965	CHLOROETHANE	0	10	* 7.16	ug/L	71.6	
SPI01	Q106250	A320965	CHLOROFORM	0	10	10.8	ug/L	108	
SPI01	Q106250	A320965	CHLOROMETHANE	0	10	8.84	ug/L	88.4	
SPI01	Q106250	A320965	TRANS-1,2-DICHLOROETHENE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	CIS-1,2-DICHLOROETHENE	0	10	9.79	ug/L	97.9	
SPI01	Q106250	A320965	DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	10	10.8	ug/L	91	
SPI01	Q106250	A320965	1,1-DICHLOROETHANE	0	10	9.62	ug/L	96.2	
SPI01	Q106250	A320965	1,2-DICHLOROPROPANE	0	10	10.3	ug/L	103	
SPI01	Q106250	A320965	CIS-1,3-DICHLOROPROPENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	ETHYL BENZENE	0	10	9.22	ug/L	92.2	
SPI01	Q106250	A320965	STYRENE	0	10	9.86	ug/L	98.6	
SPI01	Q106250	A320965	1,1,2-TRICHLOROETHANE	0	10	10.9	ug/L	109	
SPI01	Q106250	A320965	1,1,2,2-TETRACHLOROETHANE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	TETRACHLOROETHENE	0	10	9.18	ug/L	91.8	
SPI01	Q106250	A320965	TOLUENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	ACETONE (2-PROPANONE)	0	10	* 23.8	ug/L	238	
SPI01	Q106250	A320965	CARBON DISULFIDE	0	10	9.14	ug/L	91.4	
SPI01	Q106250	A320965	2-BUTANONE	0	10	11.9	ug/L	119	
SPI01	Q106250	A320965	4-METHYL-2-PENTANONE	0	10	* 6.64	ug/L	66.4	
SPI01	Q106250	A320965	2-HEXANONE	0	10	11	ug/L	110	
CCV	Q106241		See Attached Report g7870j.ind						
BLA01	Q106242		See Attached Report g7871j.ind						
SAMPLE	A320964		See Certificate of Analysis						
LCS01	Q106247		CHLOROETHANE	4		3.53	ug/L	88.3	
LCS01	Q106247		ACETONE (2-PROPANONE)	4		* 5.11	ug/L	127.8	
LCS01	Q106247		4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q106269		CHLOROETHANE	4		3.11	ug/L	77.8	12.
DLCS1	Q106269		ACETONE (2-PROPANONE)	4		* 10.5	ug/L	262.5	69
DLCS1	Q106269		4-METHYL-2-PENTANONE	4		3.77	ug/L	94.3	5.7

Comments

*Q106247 NOTE: * OUTSIDE ADVISORY LIMITS*
*Q106269 NOTE: * OUTSIDE ADVISORY LIMITS*

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 09-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 12-SEP-94 File ID: >0860B Run: R229478

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74	
SPI02	Q993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7	
SPI02	Q993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8	
SPI02	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5	
SPI02	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8	
SPI02	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9	
SPI02	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7	
SPI02	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4	
SPI02	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1	
SPI02	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5	
SPI02	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2	
SPI02	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5	
SPI02	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82	
SPI02	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2	
SPI02	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6	
SPI02	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5	
SPI02	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7	
SPI02	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1	
SPI02	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9	
SPI02	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9	
SPI02	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7	
SPI02	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3	
SPI02	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6	
SPI02	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7	
SPI02	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8	
SPI02	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3	
SPI02	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1	
SPI02	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103	
SPI02	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4	
SPI02	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3	
SPI02	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9	
SPI02	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3	
SPI02	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	
SPI02	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6	
SPI02	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5	
SPI02	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9	
SPI02	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9	
SPI02	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1	
SPI02	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7	
SPI02	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9	
SPI02	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6	
SPI02	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74	
SPI02	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88	
SPI02	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4	
SPI02	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2	
SPI02	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2	
SPI02	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5	
SPI02	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6	
SPI02	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80	
SPI02	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3	
SPI02	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5	
SPI02	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6	
SPI02	0993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SPI02	0993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SPI02	0993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SPI02	0993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SPI02	0993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SPI02	0993144	A320257	PHENOL	0	100	57	ug/L	57	
SPI02	0993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	Q993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	Q993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	Q993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	1
DPS02	Q993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	[illegible].9
DPS02	Q993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	Q993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	Q993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	Q993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	Q993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	Q993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	Q993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	Q993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	Q993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	Q993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	Q993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	Q993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	Q993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	Q993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.
DPS02	Q993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	Q993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	Q993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	Q993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	Q993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	Q993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	Q993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	Q993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	Q993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	Q993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	9
DPS02	Q993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	[illegible]
DPS02	Q993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	Q993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	Q993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	Q993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.
DPS02	Q993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	Q993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	Q993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.
DPS02	Q993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	Q993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	Q993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	Q993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	Q993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	Q993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	Q993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	Q993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	Q993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	Q993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	Q993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	Q993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	Q993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	86.7	ug/L	86.7	6.1
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	<.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	.
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	5.9
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.5

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q103704		See Attached Report g0858b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320964		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 22-SEP-94 File ID: 5418 Run: R230887

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q998552	A320964	GAMMA-BHC (LINDANE)	0	.00089	.0008	mg/L	89.9	9.6
DPS02	Q998552	A320964	HEPTACHLOR	0	.00089	.0008	mg/L	89.9	9.6
DPS02	Q998552	A320964	ALDRIN	0	.00089	.00076	mg/L	85.4	5.5
DPS02	Q998552	A320964	DIELDRIN	0	.0018	.0017	mg/L	94.4	7.6
DPS02	Q998552	A320964	ENDRIN	0	.0018	.0017	mg/L	94.4	2.9
DPS02	Q998552	A320964	4,4'-DDT	0	.0018	.0012	mg/L	66.7	6.5
SPI02	Q998551	A320964	GAMMA-BHC (LINDANE)	0	.0012	.00098	mg/L	81.7	
SPI02	Q998551	A320964	HEPTACHLOR	0	.0012	.00098	mg/L	81.7	
SPI02	Q998551	A320964	ALDRIN	0	.0012	.00097	mg/L	80.8	
SPI02	Q998551	A320964	DIELDRIN	0	.0024	.0021	mg/L	87.5	
SPI02	Q998551	A320964	ENDRIN	0	.0024	.0022	mg/L	91.7	
SPI02	Q998551	A320964	4,4'-DDT	0	.0024	.0015	mg/L	62.5	
BLA02	Q998549		ALPHA-BHC			< .00002	mg/L		
BLA02	Q998549		BETA-BHC			< .00002	mg/L		
BLA02	Q998549		DELTA-BHC			< .00002	mg/L		
BLA02	Q998549		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q998549		HEPTACHLOR			< .00002	mg/L		
BLA02	Q998549		ALDRIN			< .00002	mg/L		
BLA02	Q998549		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q998549		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q998549		DIELDRIN			< .00004	mg/L		
BLA02	Q998549		4,4'-DDE			< .00004	mg/L		
BLA02	Q998549		ENDRIN			< .00004	mg/L		
BLA02	Q998549		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q998549		4,4'-DDD			< .00004	mg/L		
BLA02	Q998549		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q998549		4,4'-DDT			< .00004	mg/L		
BLA02	Q998549		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q998549		ENDRIN KETONE			< .0004	mg/L		
BLA02	Q998549		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q998549		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q998549		TOXAPHENE			< .0004	mg/L		
BLA02	Q998549		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q998549		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q998549		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q998549		PCB AROCHLOR 1242			< .0002	mg/L		
BLA02	Q998549		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q998549		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q998549		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q998550	EMS	GAMMA-BHC (LINDANE)	.0005		.00043	mg/L	86	
LCS	Q998550	EMS	HEPTACHLOR	.0005		.00041	mg/L	82	
LCS	Q998550	EMS	ALDRIN	.0005		.00036	mg/L	72	
LCS	Q998550	EMS	DIELDRIN	.001		.001	mg/L	100	

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320964

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0998550	EMS	ENDRIN	.001		.0011	mg/L	110	
LCS	0998550	EMS	4,4'-DDT	.001		.00071	mg/L	71	
SAMPLE	A320964		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: HWBusch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320965
	Complete	PO Number
	26-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 08:50

Sample Description

SAMPLE I.D.: SW-083094-KJJ-106
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: M. WILLIAMS Review Date: 16-SEP-94 File ID: >7875J Run: R230114

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPC
SPI01	Q106250	A320965	BENZENE	0	10	10	ug/L	100	
SPI01	Q106250	A320965	CARBON TETRACHLORIDE	0	10	9.39	ug/L	93.9	
SPI01	Q106250	A320965	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	1,1-DICHLOROETHENE	0	10	9.23	ug/L	92.3	
SPI01	Q106250	A320965	1,1,1-TRICHLOROETHANE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	TRICHLOROETHENE	0	10	9.73	ug/L	97.3	
SPI01	Q106250	A320965	VINYL CHLORIDE	0	10	9.2	ug/L	92	
SPI01	Q106250	A320965	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	BROMOFORM	0	10	9.82	ug/L	98.2	
SPI01	Q106250	A320965	BROMOMETHANE	0	10	9.13	ug/L	91.3	
SPI01	Q106250	A320965	CHLOROBENZENE	0	10	9.63	ug/L	96.3	
SPI01	Q106250	A320965	DIBROMOCHLOROMETHANE	0	10	10.1	ug/L	101	
SPI01	Q106250	A320965	CHLOROETHANE	0	10	* 7.16	ug/L	71.6	
SPI01	Q106250	A320965	CHLOROFORM	0	10	10.8	ug/L	108	
SPI01	Q106250	A320965	CHLOROMETHANE	0	10	8.84	ug/L	88.4	
SPI01	Q106250	A320965	TRANS-1,2-DICHLOROETHENE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	CIS-1,2-DICHLOROETHENE	0	10	9.79	ug/L	97.9	
SPI01	Q106250	A320965	DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	10	10.8	ug/L	91	
SPI01	Q106250	A320965	1,1-DICHLOROETHANE	0	10	9.62	ug/L	96.2	
SPI01	Q106250	A320965	1,2-DICHLOROPROPANE	0	10	10.3	ug/L	103	
SPI01	Q106250	A320965	CIS-1,3-DICHLOROPROPENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	ETHYL BENZENE	0	10	9.22	ug/L	92.2	
SPI01	Q106250	A320965	STYRENE	0	10	9.86	ug/L	98.6	
SPI01	Q106250	A320965	1,1,2-TRICHLOROETHANE	0	10	10.9	ug/L	109	
SPI01	Q106250	A320965	1,1,2,2-TETRACHLOROETHANE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	TETRACHLOROETHENE	0	10	9.18	ug/L	91.8	
SPI01	Q106250	A320965	TOLUENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	ACETONE (2-PROPANONE)	0	10	* 23.8	ug/L	238	
SPI01	Q106250	A320965	CARBON DISULFIDE	0	10	9.14	ug/L	91.4	
SPI01	Q106250	A320965	4-METHYL-2-PENTANONE	0	10	* 6.64	ug/L	66.4	
SPI01	Q106250	A320965	2-HEXANONE	0	10	11	ug/L	110	
CCV	Q106241		See Attached Report g7870j.ind						
BLA01	Q106242		See Attached Report g7871j.ind						
SAMPLE	A320965		See Certificate of Analysis						
LCS01	Q106247		CHLOROETHANE	4		3.53	ug/L	88.3	
LCS01	Q106247		ACETONE (2-PROPANONE)	4		* 5.11	ug/L	127.8	
LCS01	Q106247		4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q106269		CHLOROETHANE	4		3.11	ug/L	77.8	12
DLCS1	Q106269		ACETONE (2-PROPANONE)	4		* 10.5	ug/L	262.5	69
DLCS1	Q106269		4-METHYL-2-PENTANONE	4		3.77	ug/L	94.3	5.

Comments

Q106247 NOTE: * OUTSIDE ADVISORY LIMITS
Q106269 NOTE: * OUTSIDE ADVISORY LIMITS

Notes

* See Note for Parameter

Quality Assurance Officer: HABusch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320966
	Complete	PO Number
	26-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 11:15

Sample Description

SAMPLE I.D.: SW-083094-KJJ-110
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: H. WILLIAMS Review Date: 16-SEP-94 File ID: >7876J Run: RZ30114

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106250	A320965	BENZENE	0	10	10	ug/L	100	
SPI01	Q106250	A320965	CARBON TETRACHLORIDE	0	10	9.39	ug/L	93.9	
SPI01	Q106250	A320965	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	1,1-DICHLOROETHENE	0	10	9.23	ug/L	92.3	
SPI01	Q106250	A320965	1,1,1-TRICHLOROETHANE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	TRICHLOROETHENE	0	10	9.73	ug/L	97.3	
SPI01	Q106250	A320965	VINYL CHLORIDE	0	10	9.2	ug/L	92	
SPI01	Q106250	A320965	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	BROMOFORM	0	10	9.82	ug/L	98.2	
SPI01	Q106250	A320965	BROMOMETHANE	0	10	9.13	ug/L	91.3	
SPI01	Q106250	A320965	CHLOROBENZENE	0	10	9.63	ug/L	96.3	
SPI01	Q106250	A320965	DIBROMOCHLOROMETHANE	0	10	10.1	ug/L	101	
SPI01	Q106250	A320965	CHLOROETHANE	0	10	* 7.16	ug/L	71.6	
SPI01	Q106250	A320965	CHLOROFORM	0	10	10.8	ug/L	108	
SPI01	Q106250	A320965	CHLOROMETHANE	0	10	8.84	ug/L	88.4	
SPI01	Q106250	A320965	TRANS-1,2-DICHLOROETHENE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	CIS-1,2-DICHLOROETHENE	0	10	9.79	ug/L	97.9	
SPI01	Q106250	A320965	DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	10	10.8	ug/L	91	
SPI01	Q106250	A320965	1,1-DICHLOROETHANE	0	10	9.62	ug/L	96.2	
SPI01	Q106250	A320965	1,2-DICHLOROPROPANE	0	10	10.3	ug/L	103	
SPI01	Q106250	A320965	CIS-1,3-DICHLOROPROPENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	ETHYL BENZENE	0	10	9.22	ug/L	92.2	
SPI01	Q106250	A320965	STYRENE	0	10	9.86	ug/L	98.6	
SPI01	Q106250	A320965	1,1,2-TRICHLOROETHANE	0	10	10.9	ug/L	109	
SPI01	Q106250	A320965	1,1,2,2-TETRACHLOROETHANE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	TETRACHLOROETHENE	0	10	9.18	ug/L	91.8	
SPI01	Q106250	A320965	TOLUENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	ACETONE (2-PROPANONE)	0	10	* 23.8	ug/L	238	
SPI01	Q106250	A320965	CARBON DISULFIDE	0	10	9.14	ug/L	91.4	
SPI01	Q106250	A320965	4-METHYL-2-PENTANONE	0	10	* 6.64	ug/L	66.4	
SPI01	Q106250	A320965	2-HEXANONE	0	10	11	ug/L	110	
CCV	Q106241		See Attached Report g7870j.ind						
BLA01	Q106242		See Attached Report g7871j.ind						
SAMPLE	A320966		See Certificate of Analysis						
LCS01	Q106247		CHLOROETHANE	4		3.53	ug/L	88.3	
LCS01	Q106247		ACETONE (2-PROPANONE)	4		* 5.11	ug/L	127.8	
LCS01	Q106247		4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q106269		CHLOROETHANE	4		3.11	ug/L	77.8	12.[illegible]
DLCS1	Q106269		ACETONE (2-PROPANONE)	4		* 10.5	ug/L	262.5	69
DLCS1	Q106269		4-METHYL-2-PENTANONE	4		3.77	ug/L	94.3	5.7

Comments

Q106247 NOTE: * OUTSIDE ADVISORY LIMITS
Q106269 NOTE: * OUTSIDE ADVISORY LIMITS

Notes

* See Note for Parameter

Quality Assurance Officer: H A Buck

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320967
	Complete	PO Number
	26-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 12:00

Sample Description

SAMPLE I.D.: SW-083094-KJJ-111
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: M. WILLIAMS Review Date: 16-SEP-94 File ID: >7877J Run: R230114

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106250	A320965	BENZENE	0	10	10	ug/L	100	
SPI01	Q106250	A320965	CARBON TETRACHLORIDE	0	10	9.39	ug/L	93.9	
SPI01	Q106250	A320965	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	1,1-DICHLOROETHENE	0	10	9.23	ug/L	92.3	
SPI01	Q106250	A320965	1,1,1-TRICHLOROETHANE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	TRICHLOROETHENE	0	10	9.73	ug/L	97.3	
SPI01	Q106250	A320965	VINYL CHLORIDE	0	10	9.2	ug/L	92	
SPI01	Q106250	A320965	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	BROMOFORM	0	10	9.82	ug/L	98.2	
SPI01	Q106250	A320965	BROMOMETHANE	0	10	9.13	ug/L	91.3	
SPI01	Q106250	A320965	CHLOROBENZENE	0	10	9.63	ug/L	96.3	
SPI01	Q106250	A320965	DIBROMOCHLOROMETHANE	0	10	10.1	ug/L	101	
SPI01	Q106250	A320965	CHLOROETHANE	0	10	* 7.16	ug/L	71.6	
SPI01	Q106250	A320965	CHLOROFORM	0	10	10.8	ug/L	108	
SPI01	Q106250	A320965	CHLOROMETHANE	0	10	8.84	ug/L	88.4	
SPI01	Q106250	A320965	TRANS-1,2-DICHLOROETHENE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	CIS-1,2-DICHLOROETHENE	0	10	9.79	ug/L	97.9	
SPI01	Q106250	A320965	DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	10	10.8	ug/L	91	
SPI01	Q106250	A320965	1,1-DICHLOROETHANE	0	10	9.62	ug/L	96.2	
SPI01	Q106250	A320965	1,2-DICHLOROPROPANE	0	10	10.3	ug/L	103	
SPI01	Q106250	A320965	CIS-1,3-DICHLOROPROPENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	ETHYL BENZENE	0	10	9.22	ug/L	92.2	
SPI01	Q106250	A320965	STYRENE	0	10	9.86	ug/L	98.6	
SPI01	Q106250	A320965	1,1,2-TRICHLOROETHANE	0	10	10.9	ug/L	109	
SPI01	Q106250	A320965	1,1,2,2-TETRACHLOROETHANE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	TETRACHLOROETHENE	0	10	9.18	ug/L	91.8	
SPI01	Q106250	A320965	TOLUENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	ACETONE (2-PROPANONE)	0	10	* 23.8	ug/L	238	
SPI01	Q106250	A320965	CARBON DISULFIDE	0	10	9.14	ug/L	91.4	
SPI01	Q106250	A320965	4-METHYL-2-PENTANONE	0	10	* 6.64	ug/L	66.4	
SPI01	Q106250	A320965	2-HEXANONE	0	10	11	ug/L	110	
CCV	Q106241		See Attached Report g7870j.ind						
BLA01	Q106242		See Attached Report g7871j.ind						
SAMPLE	A320967		See Certificate of Analysis						
LCS01	Q106247		CHLOROETHANE	4		3.53	ug/L	88.3	
LCS01	Q106247		ACETONE (2-PROPANONE)	4		* 5.11	ug/L	127.8	
LCS01	Q106247		4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q106269		CHLOROETHANE	4		3.11	ug/L	77.8	12.6
DLCS1	Q106269		ACETONE (2-PROPANONE)	4		* 10.5	ug/L	262.5	69
DLCS1	Q106269		4-METHYL-2-PENTANONE	4		3.77	ug/L	94.3	5.7

Comments

Q106247 NOTE: * OUTSIDE ADVISORY LIMITS
Q106269 NOTE: * OUTSIDE ADVISORY LIMITS

Notes

* See Note for Parameter

Quality Assurance Officer: GABusch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320968
	Complete	PO Number
	26-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94

Sample Description

SAMPLE I.D.: SW-083094-KJJ-112
PROJECT: FOUR COUNTY LANDFILL

VOLATILE ORGANICS (CAPILLARY COLUMN) SW846-8260

Analyst : R. SHAMP Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.6.0
Reviewer: M. WILLIAMS Review Date: 16-SEP-94 File ID: >7881J Run: R230114

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106250	A320965	BENZENE	0	10	10	ug/L	100	
SPI01	Q106250	A320965	CARBON TETRACHLORIDE	0	10	9.39	ug/L	93.9	
SPI01	Q106250	A320965	1,2-DICHLOROETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	1,1-DICHLOROETHENE	0	10	9.23	ug/L	92.3	
SPI01	Q106250	A320965	1,1,1-TRICHLOROETHANE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	TRICHLOROETHENE	0	10	9.73	ug/L	97.3	
SPI01	Q106250	A320965	VINYL CHLORIDE	0	10	9.2	ug/L	92	
SPI01	Q106250	A320965	BROMODICHLOROMETHANE	0	10	10.6	ug/L	106	
SPI01	Q106250	A320965	BROMOFORM	0	10	9.82	ug/L	98.2	
SPI01	Q106250	A320965	BROMOMETHANE	0	10	9.13	ug/L	91.3	
SPI01	Q106250	A320965	CHLOROBENZENE	0	10	9.63	ug/L	96.3	
SPI01	Q106250	A320965	DIBROMOCHLOROMETHANE	0	10	10.1	ug/L	101	
SPI01	Q106250	A320965	CHLOROETHANE	0	10	* 7.16	ug/L	71.6	
SPI01	Q106250	A320965	CHLOROFORM	0	10	10.8	ug/L	108	
SPI01	Q106250	A320965	CHLOROMETHANE	0	10	8.84	ug/L	88.4	
SPI01	Q106250	A320965	TRANS-1,2-DICHLOROETHENE	0	10	9.49	ug/L	94.9	
SPI01	Q106250	A320965	CIS-1,2-DICHLOROETHENE	0	10	9.79	ug/L	97.9	
SPI01	Q106250	A320965	DICHLOROMETHANE (METHYLENE CHLORIDE)	1.7	10	10.8	ug/L	91	
SPI01	Q106250	A320965	1,1-DICHLOROETHANE	0	10	9.62	ug/L	96.2	
SPI01	Q106250	A320965	1,2-DICHLOROPROPANE	0	10	10.3	ug/L	103	
SPI01	Q106250	A320965	CIS-1,3-DICHLOROPROPENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	TRANS-1,3-DICHLOROPROPENE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	ETHYL BENZENE	0	10	9.22	ug/L	92.2	
SPI01	Q106250	A320965	STYRENE	0	10	9.86	ug/L	98.6	
SPI01	Q106250	A320965	1,1,2-TRICHLOROETHANE	0	10	10.9	ug/L	109	
SPI01	Q106250	A320965	1,1,2,2-TETRACHLOROETHANE	0	10	10.4	ug/L	104	
SPI01	Q106250	A320965	TETRACHLOROETHENE	0	10	9.18	ug/L	91.8	
SPI01	Q106250	A320965	TOLUENE	0	10	10.2	ug/L	102	
SPI01	Q106250	A320965	ACETONE (2-PROPANONE)	0	10	* 23.8	ug/L	238	
SPI01	Q106250	A320965	CARBON DISULFIDE	0	10	9.14	ug/L	91.4	
SPI01	Q106250	A320965	4-METHYL-2-PENTANONE	0	10	* 6.64	ug/L	66.4	
SPI01	Q106250	A320965	2-HEXANONE	0	10	11	ug/L	110	
CCV	Q106241		See Attached Report g7870j.ind						
BLA01	Q106242		See Attached Report g7871j.ind						
SAMPLE	A320968		See Certificate of Analysis						
LCS01	Q106247		CHLOROETHANE	4		3.53	ug/L	88.3	
LCS01	Q106247		ACETONE (2-PROPANONE)	4		* 5.11	ug/L	127.8	
LCS01	Q106247		4-METHYL-2-PENTANONE	4		3.99	ug/L	99.8	
DLCS1	Q106269		CHLOROETHANE	4		3.11	ug/L	77.8	12.6
DLCS1	Q106269		ACETONE (2-PROPANONE)	4		* 10.5	ug/L	262.5	69
DLCS1	Q106269		4-METHYL-2-PENTANONE	4		3.77	ug/L	94.3	5.7

Comments

Q106247 NOTE: * OUTSIDE ADVISORY LIMITS
Q106269 NOTE: * OUTSIDE ADVISORY LIMITS

Notes

* See Note for Parameter

Quality Assurance Officer: GA Buck

SEDIMENT

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313424
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	08-JUL-94	5369
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 11:15

Sample Description

SAMPLE ID: D-060494-WP-002
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	Q938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313424		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	Q941093	A313428	CYANIDE	.57		.66	mg/kg		14.6
SPI02	Q941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941083		CYANIDE	.1		.098	mg/L	98	
BLA01	Q941084		CYANIDE			-.0003	mg/L		
LFB02	Q940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	Q940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q941086		CYANIDE	.1		.111	mg/L	111	
BLA01	Q941087		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	D
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L		
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313424		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	Q947260	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945266		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313424		See Certificate of Analysis						
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	
BLA01	Q945268		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : R. SHAMP Analysis Date: 08-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 09-JUN-94 File ID: >5789C Run: R219719

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q939654		See Attached Report g5780c.ind						
SAMPLE	A313424		See Certificate of Analysis						
LCS01	Q939661	EMS	ACETONE	20		36.8	ug/L	184	
LCS01	Q939661	EMS	BENZENE	20		18.9	ug/L	94.5	
LCS01	Q939661	EMS	BROMODICHLOROMETHANE	20		18.1	ug/L	90.5	
LCS01	Q939661	EMS	BROMOFORM	20		16	ug/L	80	
LCS01	Q939661	EMS	BROMOMETHANE	20		21	ug/L	105	
LCS01	Q939661	EMS	CARBON DISULFIDE	20		20.5	ug/L	102.5	
LCS01	Q939661	EMS	CARBON TETRACHLORIDE	20		18.7	ug/L	93.5	
LCS01	Q939661	EMS	CHLOROBENZENE	20		18.5	ug/L	92.5	
LCS01	Q939661	EMS	CHLOROETHANE	20		17.6	ug/L	88	
LCS01	Q939661	EMS	CHLOROFORM	20		20.4	ug/L	102	
LCS01	Q939661	EMS	CHLOROMETHANE	20		19.4	ug/L	97	
LCS01	Q939661	EMS	DIBROMOCHLOROMETHANE	20		17.6	ug/L	88	
LCS01	Q939661	EMS	CIS-1,3-DICHLOROPROPENE	20		17.8	ug/L	89	
LCS01	Q939661	EMS	1,1-DICHLOROETHANE	20		17.2	ug/L	86	
LCS01	Q939661	EMS	1,2-DICHLOROETHANE	20		21	ug/L	105	
LCS01	Q939661	EMS	1,1-DICHLOROETHENE	20		18.5	ug/L	92.5	
LCS01	Q939661	EMS	1,2-DICHLOROPROPANE	20		18.4	ug/L	92	
LCS01	Q939661	EMS	ETHYL BENZENE	20		18.8	ug/L	94	
LCS01	Q939661	EMS	2-HEXANONE	20		22.4	ug/L	112	
LCS01	Q939661	EMS	DICHLOROMETHANE (METHYLENE CHLORIDE)	20		20.7	ug/L	103.5	
LCS01	Q939661	EMS	METHYL ETHYL KETONE	20		24.4	ug/L	122	
LCS01	Q939661	EMS	4-METHYL-2-PENTANONE	20		19.1	ug/L	95.5	
LCS01	Q939661	EMS	STYRENE	20		18.3	ug/L	91.5	
LCS01	Q939661	EMS	1,1,2,2-TETRACHLOROETHANE	20		17.8	ug/L	89	
LCS01	Q939661	EMS	TETRACHLOROETHENE	20		19.5	ug/L	97.5	
LCS01	Q939661	EMS	TOLUENE	20		20.3	ug/L	101.5	
LCS01	Q939661	EMS	1,2-DICHLOROETHENE (CIS AND TRANS)	40		40.9	ug/L	102.3	
LCS01	Q939661	EMS	TRANS-1,3-DICHLOROPROPENE	20		17.4	ug/L	87	
LCS01	Q939661	EMS	1,1,1-TRICHLOROETHANE	20		19	ug/L	95	
LCS01	Q939661	EMS	1,1,2-TRICHLOROETHANE	20		18.9	ug/L	94.5	
LCS01	Q939661	EMS	TRICHLOROETHENE	20		18.9	ug/L	94.5	
LCS01	Q939661	EMS	VINYL CHLORIDE	20		18.2	ug/L	91	
LCS01	Q939661	EMS	XYLENES (O/M/P-XYLENE)	60		57.3	ug/L	95.5	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.9.1
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5861C Run: R220018

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941332	A313432	1,1-DICHLOROETHENE	0	50	50.9	ug/kg	101.8	
SPI01	Q941332	A313432	TRICHLOROETHENE	0	50	50.8	ug/kg	101.6	
SPI01	Q941332	A313432	BENZENE	0	50	54.8	ug/kg	109.6	
SPI01	Q941332	A313432	TOLUENE	0	50	54.5	ug/kg	109	
SPI01	Q941332	A313432	CHLOROBENZENE	0	50	50	ug/kg	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS01	Q941333	A313432	1,1-DICHLOROETHENE	0	50	49.1	ug/kg	98.2	3.6
DPS01	Q941333	A313432	TRICHLOROETHENE	0	50	52.3	ug/kg	104.6	2.9
DPS01	Q941333	A313432	BENZENE	0	50	55.2	ug/kg	110.4	.7
DPS01	Q941333	A313432	TOLUENE	0	50	51.7	ug/kg	103.4	5.3
DPS01	Q941333	A313432	CHLOROBENZENE	0	50	48.9	ug/kg	97.8	2.2
CCV	Q941327		See Attached Report g5850c.ind						
SAMPLE	A313424		See Certificate of Analysis						

Comments

Q941332 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941333 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 15-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 16-JUN-94 File ID: >00568 Run: R220506

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	4.2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q944907		See Attached Report g0055b.ind						
SAMPLE	A313424		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313424

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPIO2	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPIO2	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPIO2	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPIO2	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313424		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D. Hammerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313426
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 12:15

Sample Description

SAMPLE ID: D-060494-WP-004
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	0938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313426		See Certificate of Analysis						
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313426		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	0941093	A313428	CYANIDE	.57		.66	mg/kg		14.6
SPI02	0941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941083		CYANIDE	.1		.098	mg/L	98	
BLA01	0941084		CYANIDE			-.0003	mg/L		
LFB02	0940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	0940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	0941086		CYANIDE	.1		.111	mg/L	111	
BLA01	0941087		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L	
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		5
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313426		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	0935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	0942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	0942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	0942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	0943117	A314115	ZINC	0		BDL	mg/L		
SPI01	0943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	0935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	0935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	0943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	0943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	0943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	0943108	NA	ZINC			< 0.008	mg/L		
LCS	0935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	0935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	0943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	0943149	NA	ZINC			< 0.008	mg/L		
CDL01	0943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	0943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	0935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	0935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	0947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	0947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	0947260	NA	ARSENIC			< 0.002	mg/L		
LCS	0935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	0935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	0947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	0947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	0947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	D
ICV01	0947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	0935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	0935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	0947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945266		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313426		See Certificate of Analysis						
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	
BLA01	Q945268		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 09-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0

Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5813C Run: R220008

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941292	A313426	1,1-DICHLOROETHENE	0	50	37.4	ug/kg	74.8	
SPI01	Q941292	A313426	TRICHLOROETHENE	0	50	41.3	ug/kg	82.6	
SPI01	Q941292	A313426	BENZENE	0	50	41.4	ug/kg	82.8	
SPI01	Q941292	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	
SPI01	Q941292	A313426	CHLOROBENZENE	0	50	42.4	ug/kg	84.8	
DPS01	Q941293	A313426	1,1-DICHLOROETHENE	0	50	39.2	ug/kg	78.4	4.
DPS01	Q941293	A313426	TRICHLOROETHENE	0	50	42.2	ug/kg	84.4	2..
DPS01	Q941293	A313426	BENZENE	0	50	45.4	ug/kg	90.8	9..
DPS01	Q941293	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	0
DPS01	Q941293	A313426	CHLOROBENZENE	0	50	41.8	ug/kg	83.6	1..
CCV	Q941290		See Attached Report g5810c.ind						
BLA01	Q941291		See Attached Report g5811c.ind						
SAMPLE	A313426		See Certificate of Analysis						

Comments

Q941292 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941293 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 15-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 16-JUN-94 File ID: >0057B Run: R220506

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	.
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5..
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.
CCV	Q944907		See Attached Report g0055b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313426		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313426		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313427
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 12:40

Sample Description

SAMPLE ID: D-060494-WP-006
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	0938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313427		See Certificate of Analysis						
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313427		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	0941093	A313428	CYANIDE	.57		.66	mg/kg		14.6
SPI02	0941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941083		CYANIDE	.1		.098	mg/L	98	
BLA01	0941084		CYANIDE			-.0003	mg/L		
LFB02	0940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	0940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	0941086		CYANIDE	.1		.111	mg/L	111	
BLA01	0941087		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943131	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943132	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944724	INORGANIC	BARIUM	5.00		5.01	mg/L	100	
BLA01	Q944725	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942344	INORGANIC	BERYLLIUM	5.00		5.21	mg/L	104	
BLA01	Q942341	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943131	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q943132	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943131	INORGANIC	CALCIUM	50.0		48.8	mg/L	98	
BLA01	Q943132	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943131	INORGANIC	CHROMIUM	5.00		5.00	mg/L	100	
BLA01	Q943132	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942344	INORGANIC	COBALT	5.00		5.18	mg/L	104	
BLA01	Q942341	NA	COBALT			< 0.004	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L	
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943131	INORGANIC	COPPER	5.00		5.08	mg/L	102	
BLA01	Q943132	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943131	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943132	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943131	INORGANIC	MAGNESIUM	50.0		49.1	mg/L	98	
BLA01	Q943132	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942344	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942341	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		3
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943131	INORGANIC	NICKEL	5.00		4.97	mg/L	99	
BLA01	Q943132	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943131	INORGANIC	POTASSIUM	50.0		49.1	mg/L	98	
BLA01	Q943132	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313427		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942344	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942341	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942344	INORGANIC	SODIUM	50.0		52.8	mg/L	106	
BLA01	Q942341	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942344	INORGANIC	VANADIUM	5.00		5.23	mg/L	105	
BLA01	Q942341	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943131	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q943132	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	Q947260	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg	
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945266		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313427		See Certificate of Analysis						
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	
BLA01	Q945268		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 09-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0

Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5816C Run: R220008

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941292	A313426	1,1-DICHLOROETHENE	0	50	37.4	ug/kg	74.8	
SPI01	Q941292	A313426	TRICHLOROETHENE	0	50	41.3	ug/kg	82.6	
SPI01	Q941292	A313426	BENZENE	0	50	41.4	ug/kg	82.8	
SPI01	Q941292	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	
SPI01	Q941292	A313426	CHLOROBENZENE	0	50	42.4	ug/kg	84.8	
DPS01	Q941293	A313426	1,1-DICHLOROETHENE	0	50	39.2	ug/kg	78.4	4.7
DPS01	Q941293	A313426	TRICHLOROETHENE	0	50	42.2	ug/kg	84.4	2.2
DPS01	Q941293	A313426	BENZENE	0	50	45.4	ug/kg	90.8	9.2
DPS01	Q941293	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	0
DPS01	Q941293	A313426	CHLOROBENZENE	0	50	41.8	ug/kg	83.6	1.4
CCV	Q941290		See Attached Report g5810c.ind						
BLA01	Q941291		See Attached Report g5811c.ind						
SAMPLE	A313427		See Certificate of Analysis						

Comments

Q941292 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941293 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 15-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 16-JUN-94 File ID: >00588 Run: R220506

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q944907		See Attached Report g0055b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313427		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313427		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Hammerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313428
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	08-JUL-94	5369
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 13:00

Sample Description

SAMPLE ID: D-060494-WP-008
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	0938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313428		See Certificate of Analysis						
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313428		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	0941093	A313428	CYANIDE	.57		.66	mg/kg		14.6
SPI02	0941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941086		CYANIDE	.1		.111	mg/L	111	
BLA01	0941087		CYANIDE			-.0003	mg/L		
LFB02	0940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	0940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	0941094		CYANIDE	.1		.111	mg/L	111	
BLA01	0941095		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L		
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313428		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	Q947260	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945266		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313428		See Certificate of Analysis						
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	
BLA01	Q945268		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 09-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0

Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: 5817C Run: R220008

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941292	A313426	1,1-DICHLOROETHENE	0	50	37.4	ug/kg	74.8	
SPI01	Q941292	A313426	TRICHLOROETHENE	0	50	41.3	ug/kg	82.6	
SPI01	Q941292	A313426	BENZENE	0	50	41.4	ug/kg	82.8	
SPI01	Q941292	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	
SPI01	Q941292	A313426	CHLOROBENZENE	0	50	42.4	ug/kg	84.8	
DPS01	Q941293	A313426	1,1-DICHLOROETHENE	0	50	39.2	ug/kg	78.4	4.7
DPS01	Q941293	A313426	TRICHLOROETHENE	0	50	42.2	ug/kg	84.4	2.2
DPS01	Q941293	A313426	BENZENE	0	50	45.4	ug/kg	90.8	9.2
DPS01	Q941293	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	0
DPS01	Q941293	A313426	CHLOROBENZENE	0	50	41.8	ug/kg	83.6	1.4
CCV	Q941290		See Attached Report g5810c.ind						
BLA01	Q941291		See Attached Report g5811c.ind						
SAMPLE	A313428		See Certificate of Analysis						

Comments

Q941292 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941293 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 15-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 16-JUN-94 File ID: >0059B Run: R220506

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	.2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q944907		See Attached Report g0055b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313428		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: Q305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313428		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N Zimmerlin

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313429
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 13:45

Sample Description

SAMPLE ID: D-060494-WP-010
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	0938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313429		See Certificate of Analysis						
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313429		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948
Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	0941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	0941093	A313428	CYANIDE	.57		.66	mg/kg		14.6
SPI02	0941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	0940931		CYANIDE	.01		.009	mg/L	90	
CCV	0941086		CYANIDE	.1		.111	mg/L	111	
BLA01	0941087		CYANIDE			-.0003	mg/L		
LFB02	0940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	0940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0941094		CYANIDE	.1		.111	mg/L	111	
BLA01	0941095		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L	
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	0935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	0935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	0943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	0943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	0943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	0943108	NA	COPPER			< 0.008	mg/L		
LCS	0935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	0935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	0943149	NA	COPPER			< 0.008	mg/L		
CDL01	0943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	0943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	0943117	A314115	IRON	0		BDL	mg/L		
SPI01	0943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	0935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	0943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	0943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	0943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	0943108	NA	IRON			< 0.01	mg/L		
LCS	0935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	0935456	NA	IRON			.058	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	0943149	NA	IRON			< 0.01	mg/L		
ICS-A	0943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	0943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	0935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	0935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	0943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	0943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	0943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	0935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	0943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	0942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	0942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	0935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	0942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	0942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	0942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	0942336	NA	MANGANESE			< 0.004	mg/L		
LCS	0935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	0935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0942335	INORGANIC	MANGANESE	5.00		[illegible].19	mg/L	104	
BLA01	0942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	0942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	0943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	0943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	0935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	0935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	0943133	INORGANIC	NICKEL	10		9.[illegible]	mg/L	100	
ICS-A	0943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	0943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	0943108	NA	NICKEL			< 0.004	mg/L		
LCS	0935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	0935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	0943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	0943149	NA	NICKEL			< 0.004	mg/L		
CDL01	0943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	0943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	0943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	0943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	0935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	0935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	0943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	0943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	0935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	0935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313429		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	Q947260	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945266		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313429		See Certificate of Analysis						
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	
BLA01	Q945268		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 09-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5818C Run: R220008

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941292	A313426	1,1-DICHLOROETHENE	0	50	37.4	ug/kg	74.8	
SPI01	Q941292	A313426	TRICHLOROETHENE	0	50	41.3	ug/kg	82.6	
SPI01	Q941292	A313426	BENZENE	0	50	41.4	ug/kg	82.8	
SPI01	Q941292	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	
SPI01	Q941292	A313426	CHLOROBENZENE	0	50	42.4	ug/kg	84.8	
DPS01	Q941293	A313426	1,1-DICHLOROETHENE	0	50	39.2	ug/kg	78.4	4.7
DPS01	Q941293	A313426	TRICHLOROETHENE	0	50	42.2	ug/kg	84.4	2.2
DPS01	Q941293	A313426	BENZENE	0	50	45.4	ug/kg	90.8	9.2
DPS01	Q941293	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	0
DPS01	Q941293	A313426	CHLOROBENZENE	0	50	41.8	ug/kg	83.6	1.4
CCV	Q941290		See Attached Report g5810c.ind						
BLA01	Q941291		See Attached Report g5811c.ind						
SAMPLE	A313429		See Certificate of Analysis						

Comments

Q941292 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941293 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >0073B Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313429		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313429		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D. Kemmerle

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313430
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 14:00

Sample Description

SAMPLE ID: D-060494-WP-012
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	Q938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313430		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	Q941093	A313428	CYANIDE	.57		.66	mg/kg		14.c
SPI02	Q941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941086		CYANIDE	.1		.111	mg/L	111	
BLA01	Q941087		CYANIDE			-.0003	mg/L		
LFB02	Q940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	Q940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q941094		CYANIDE	.1		.111	mg/L	111	
BLA01	Q941095		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	D
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L		
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313430		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947261	INORGANIC	ARSENIC	.1		0.101	mg/L	101	
BLA01	Q947260	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947261	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947260	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947261	INORGANIC	THALLIUM	.1		0.103	mg/L	103	
BLA01	Q947260	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947261	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947260	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945268		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313430		See Certificate of Analysis						
CCV	Q945269		MERCURY	.003		.0028	mg/L	93.3	
BLA01	Q945270		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 09-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5822C Run: R220008

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941292	A313426	1,1-DICHLOROETHENE	0	50	37.4	ug/kg	74.8	
SPI01	Q941292	A313426	TRICHLOROETHENE	0	50	41.3	ug/kg	82.6	
SPI01	Q941292	A313426	BENZENE	0	50	41.4	ug/kg	82.8	
SPI01	Q941292	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	
SPI01	Q941292	A313426	CHLOROBENZENE	0	50	42.4	ug/kg	84.8	
DPS01	Q941293	A313426	1,1-DICHLOROETHENE	0	50	39.2	ug/kg	78.4	4.7
DPS01	Q941293	A313426	TRICHLOROETHENE	0	50	42.2	ug/kg	84.4	2.2
DPS01	Q941293	A313426	BENZENE	0	50	45.4	ug/kg	90.8	9.2
DPS01	Q941293	A313426	TOLUENE	0	50	49.2	ug/kg	98.4	0
DPS01	Q941293	A313426	CHLOROBENZENE	0	50	41.8	ug/kg	83.6	1.4
CCV	Q941290		See Attached Report g5810c.ind						
BLA01	Q941291		See Attached Report g5811c.ind						
SAMPLE	A313430		See Certificate of Analysis						

Comments

Q941292 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941293 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00748 Run: R220662
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313430		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: Q305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313430		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: R. Lemmerlerus

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313431
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 14:30

Sample Description

SAMPLE ID: D-060494-WP-014
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
BLA01	Q938588		TOTAL ORGANIC CARBON (TOC)			-.926	mg/L		
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313431		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 10-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948
Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	Q941093	A313428	CYANIDE	.57		.66	mg/kg		14.
SPI02	Q941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941086		CYANIDE	.1		.111	mg/L	111	
BLA01	Q941087		CYANIDE			-.0003	mg/L		
LFB02	Q940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	Q940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q941094		CYANIDE	.1		.111	mg/L	111	
BLA01	Q941095		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	
CCV	Q946535	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q946534	NA	ANTIMONY			< 0.012	mg/L		

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L		
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RP
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313431		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	
CCV	Q947252	INORGANIC	ARSENIC	.1		0.0980	mg/L	98	
BLA01	Q947251	NA	ARSENIC			< 0.002	mg/L		

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	Q947252	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	
CCV	Q947252	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	
CCV	Q947252	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947251	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945268		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313431		See Certificate of Analysis						
CCV	Q945269		MERCURY	.003		.0028	mg/L	93.3	
BLA01	Q945270		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 10-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5833C Run: R220050

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941759	A313431	1,1-DICHLOROETHENE	0	50	45.5	ug/kg	91	
SPI01	Q941759	A313431	TRICHLOROETHENE	0	50	46.2	ug/kg	92.4	
SPI01	Q941759	A313431	BENZENE	0	50	49.5	ug/kg	99	
SPI01	Q941759	A313431	TOLUENE	13	50	53.4	ug/kg	80.8	
SPI01	Q941759	A313431	CHLOROBENZENE	0	50	50.4	ug/kg	100.8	
DPS01	Q941760	A313431	1,1-DICHLOROETHENE	0	50	47.8	ug/kg	95.6	4.9
DPS01	Q941760	A313431	TRICHLOROETHENE	0	50	51.8	ug/kg	103.6	11.4
DPS01	Q941760	A313431	BENZENE	0	50	50.6	ug/kg	101.2	2.2
DPS01	Q941760	A313431	TOLUENE	13	50	59.9	ug/kg	93.8	14.9
DPS01	Q941760	A313431	CHLOROBENZENE	0	50	51	ug/kg	102	1.2
CCV	Q941757		See Attached Report g5830c.ind						
BLA01	Q941758		See Attached Report g5831c.ind						
SAMPLE	A313431		See Certificate of Analysis						

Comments

Q941759 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941760 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00758 Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	?
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313431		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: Q305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313431		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Kemmerling

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313432
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	08-JUL-94	5369
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 15:00

Sample Description

SAMPLE ID: D-060494-WP-016
DESCRIPTION: SEDIMENT
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	Q938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313432		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 09-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 13-JUN-94 — File ID: 1150 — Run: R219948

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q940932		CYANIDE	.234		.225	mg/L	96.2	
ICV01	Q941132		CYANIDE	.234		.231	mg/L	98.7	
DUP02	Q941093	A313428	CYANIDE	.57		.66	mg/kg		14.
SPI02	Q941085	A313427	CYANIDE	.67	2.5	3.5	mg/kg	113.2	
CDL01	Q940931		CYANIDE	.01		.009	mg/L	90	
CCV	Q941100		CYANIDE	.1		.102	mg/L	102	
BLA01	Q941101		CYANIDE			-.0003	mg/L		
LFB02	Q940957		CYANIDE	.3		.278	mg/L	92.7	
BLA02	Q940958		CYANIDE			-.0003	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q941106		CYANIDE	.1		.102	mg/L	102	
BLA01	Q941107		CYANIDE			-.0003	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	
CCV	Q946535	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q946534	NA	ANTIMONY			< 0.012	mg/L		

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L	
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313432		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	0943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	0943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	0942376	A313865	SILVER	0		BDL	mg/L		
DUP02	0935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	0935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	0942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	0942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	0942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	0942336	NA	SILVER			< 0.004	mg/L		
LCS	0935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	0935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	0942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	0942334	NA	SILVER			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	0942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	0942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	0942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	0942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	0935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	0935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	0942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	0942336	NA	SODIUM			< 0.08	mg/L		
LCS	0935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	0935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	0942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	0942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	0942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	0942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	0935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	0935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	0942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	0942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	0942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	0942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	0935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	0942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	0942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	0942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	0943117	A314115	ZINC	0		BDL	mg/L		
SPI01	0943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	0935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	0935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	0943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	0943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	0943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	0943108	NA	ZINC			< 0.008	mg/L		
LCS	0935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	0935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	0943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	0943149	NA	ZINC			< 0.008	mg/L		
CDL01	0943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	0943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	0935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	0935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	0947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	0947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	0947258	NA	ARSENIC			< 0.002	mg/L		
LCS	0935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	0935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CDL01	0947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	
CCV	0947252	INORGANIC	ARSENIC	.1		0.0980	mg/L	98	
BLA01	0947251	NA	ARSENIC			< 0.002	mg/L		

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	0935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	0935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	0947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	Q947252	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	
CCV	Q947252	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	
CCV	Q947252	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947251	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945268		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313432		See Certificate of Analysis						
CCV	Q945269		MERCURY	.003		.0028	mg/L	93.3	
BLA01	Q945270		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0

Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5856C Run: R220018

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941332	A313432	1,1-DICHLOROETHENE	0	50	50.9	ug/kg	101.8	
SPI01	Q941332	A313432	TRICHLOROETHENE	0	50	50.8	ug/kg	101.6	
SPI01	Q941332	A313432	BENZENE	0	50	54.8	ug/kg	109.6	
SPI01	Q941332	A313432	TOLUENE	0	50	54.5	ug/kg	109	
SPI01	Q941332	A313432	CHLOROBENZENE	0	50	50	ug/kg	100	
DPS01	Q941333	A313432	1,1-DICHLOROETHENE	0	50	49.1	ug/kg	98.2	3.6
DPS01	Q941333	A313432	TRICHLOROETHENE	0	50	52.3	ug/kg	104.6	2.9
DPS01	Q941333	A313432	BENZENE	0	50	55.2	ug/kg	110.4	.7
DPS01	Q941333	A313432	TOLUENE	0	50	51.7	ug/kg	103.4	5.3
DPS01	Q941333	A313432	CHLOROBENZENE	0	50	48.9	ug/kg	97.8	2.2
CCV	Q941327		See Attached Report g5850c.ind						
SAMPLE	A313432		See Certificate of Analysis						

Comments

Q941332 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941333 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00768 Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						
SAMPLE	A313432		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313432		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Zimmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313433
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	08-JUL-94	5369
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 11:25

Sample Description

SAMPLE ID: D-060494-WP-029
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	Q938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313433		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 13-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 14-JUN-94 — File ID: 1151 — Run: R220133

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942463		CYANIDE	.234		.224	mg/L	95.7	
ICV01	Q942486		CYANIDE	.234		.227	mg/L	97	
DUP01	Q942468	A312688	CYANIDE	0		BDL	mg/L		
SPI02	Q942476	A313510	CYANIDE	0	.1	.102	mg/L	102	
DUP02	Q942473	A313507	CYANIDE	0		BDL	mg/L		
CDL01	Q942462		CYANIDE	.01		.01	mg/L	100	
CCV	Q942470		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942471		CYANIDE			-.0002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942474		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942475		CYANIDE			-.0002	mg/L		
LFB02	Q942472		CYANIDE	.3		.241	mg/L	80.3	

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946564	INORGANIC	ANTIMONY	1.00		1.07	mg/L	107	
BLA01	Q946563	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q946559	INORGANIC	ANTIMONY	1.00		1.09	mg/L	109	
BLA01	Q946542	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	Q935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	Q942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	Q935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	Q942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	Q935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	Q943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	Q935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	Q935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	Q943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	Q943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	Q943108	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	Q935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103	
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L		
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313433		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	
CCV	Q947252	INORGANIC	ARSENIC	.1		0.0980	mg/L	98	
BLA01	Q947251	NA	ARSENIC			< 0.002	mg/L		

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103	
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg		
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90	
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	Q947252	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	
CCV	Q947252	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	
CCV	Q947252	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947251	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945268		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313433		See Certificate of Analysis						
CCV	Q945269		MERCURY	.003		.0028	mg/L	93.3	
BLA01	Q945270		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 10-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5837C Run: R220050

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941759	A313431	1,1-DICHLOROETHENE	0	50	45.5	ug/kg	91	
SPI01	Q941759	A313431	TRICHLOROETHENE	0	50	46.2	ug/kg	92.4	
SPI01	Q941759	A313431	BENZENE	0	50	49.5	ug/kg	99	
SPI01	Q941759	A313431	TOLUENE	13	50	53.4	ug/kg	80.8	
SPI01	Q941759	A313431	CHLOROBENZENE	0	50	50.4	ug/kg	100.8	
DPS01	Q941760	A313431	1,1-DICHLOROETHENE	0	50	47.8	ug/kg	95.6	4.9
DPS01	Q941760	A313431	TRICHLOROETHENE	0	50	51.8	ug/kg	103.6	11.4
DPS01	Q941760	A313431	BENZENE	0	50	50.6	ug/kg	101.2	2.2
DPS01	Q941760	A313431	TOLUENE	13	50	59.9	ug/kg	93.8	14.9
DPS01	Q941760	A313431	CHLOROBENZENE	0	50	51	ug/kg	102	1.2
CCV	Q941757		See Attached Report g5830c.ind						
BLA01	Q941758		See Attached Report g5831c.ind						
SAMPLE	A313433		See Certificate of Analysis						

Comments

Q941759 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941760 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >0081B Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313433

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313433		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313433		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Zemmerlin

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313434
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 12:00

Sample Description

SAMPLE ID: D-060494-WP-031
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	Q938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	Q938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	Q938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313434		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 13-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 14-JUN-94 — File ID: 1151 — Run: R220133

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942463		CYANIDE	.234		.224	mg/L	95.7	
ICV01	Q942486		CYANIDE	.234		.227	mg/L	97	
DUP01	Q942468	A312688	CYANIDE	0		BDL	mg/L		
SPI02	Q942476	A313510	CYANIDE	0	.1	.102	mg/L	102	
DUP02	Q942473	A313507	CYANIDE	0		BDL	mg/L		
CDL01	Q942462		CYANIDE	.01		.01	mg/L	100	
CCV	Q942470		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942471		CYANIDE			-.0002	mg/L		
BLA02	Q942465		CYANIDE			.001	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942474		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942475		CYANIDE			-.0002	mg/L		
LFB02	Q942472		CYANIDE	.3		.241	mg/L	80.3	

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935459	A313427	ALUMINUM	11500		11900	mg/kg		3
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943120	INORGANIC	ALUMINUM	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935455	SPEX	ALUMINUM	20.0		18.5	mg/L	93	
BLA02	Q935456	NA	ALUMINUM			.189	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ALUMINUM	5.00		5.25	mg/L	105	
BLA01	Q943149	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 20-JUN-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 21-JUN-94 File ID: Run: R220769

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q946560	PERKIN ELM	ANTIMONY	0.400		0.409	mg/L	102	
DUP02	Q942928	A313427	ANTIMONY	0		BDL	mg/L		
CDL01	Q946529	PERKIN ELM	ANTIMONY	0.120		0.132	mg/L	110	
CCV	Q946540	INORGANIC	ANTIMONY	1.00		1.05	mg/L	105	
BLA01	Q946541	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q942924	SPEX	ANTIMONY	5.00		4.34	mg/L	87	
BLA02	Q942925	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CDL01	Q946537	PERKIN ELM	ANTIMONY	0.120		0.135	mg/L	113	
CCV	Q946535	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q946534	NA	ANTIMONY			< 0.012	mg/L		

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 16-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 17-JUN-94 File ID: Run: R220491

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q944745	PERKIN ELM	BARIUM	2.00		2.06	mg/L	103	
DUP02	Q940744	A313427	BARIUM	39.5		36.2	mg/kg		9
SPI02	Q940742	A313427	BARIUM	39.5	200	235.	mg/kg	98	
CDL01	Q944741	INORGANIC	BARIUM	10		10.1	mg/L	101	
ICS-A	Q944740	PERKIN ELM	BARIUM	0.500		0.497	mg/L	99	
CCV	Q944721	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	Q944722	NA	BARIUM			< 0.004	mg/L		
LCS	Q940740	SPEX	BARIUM	20.0		17.7	mg/L	89	
BLA02	Q940741	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q944758	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q944757	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q944755	PERKIN ELM	BARIUM	0.500		0.501	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	0942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	0942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	0935459	A313427	BERYLLIUM	0		.528	mg/kg		5.4
SPI02	0935457	A313427	BERYLLIUM	0	5.00	5.55	mg/kg	111	
CDL01	0942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	0942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	0942337	INORGANIC	BERYLLIUM	5.00		5.10	mg/L	102	
BLA01	0942336	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0935455	SPEX	BERYLLIUM	0.500		0.481	mg/L	96	
BLA02	0935456	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	0942335	INORGANIC	BERYLLIUM	5.00		5.09	mg/L	102	
BLA01	0942334	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	0942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	0943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	0943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	0935459	A313427	CADMIUM	0		BDL	mg/kg		
SPI02	0935462	A313427	CADMIUM	0.320	5	4.78	mg/kg	89	
CDL01	0943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	0943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	0943120	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	0943108	NA	CADMIUM			< 0.002	mg/L		
LCS	0935460	INORGANIC	CADMIUM	.5		0.454	mg/L	91	
BLA02	0935461	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	0943150	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	0943149	NA	CADMIUM			< 0.002	mg/L		
CDL01	0943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	0943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943137	SPEX	CALCIUM	100		97.1	mg/L	97	
DUP01	0943117	A314115	CALCIUM	87.0		88.3	mg/L		2
DUP02	0935459	A313427	CALCIUM	31300		32800	mg/kg		5
SPI02	0935457	A313427	CALCIUM	31300	10000	43100	mg/kg	118	
ICS-A	0943134	PERKIN ELM	CALCIUM	500		455.	mg/L	91	
CCV	0943120	INORGANIC	CALCIUM	50.0		49.5	mg/L	99	
BLA01	0943108	NA	CALCIUM			< 0.08	mg/L		
LCS	0935455	SPEX	CALCIUM	100		86.4	mg/L	86	
BLA02	0935456	NA	CALCIUM			< 0.08	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CALCIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	CALCIUM	500		426.	mg/L	85	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CHROMIUM	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	CHROMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CHROMIUM	0	0.200	0.214	mg/L	107	
DUP02	Q935459	A313427	CHROMIUM	27.7		25.2	mg/kg		10
SPI02	Q935457	A313427	CHROMIUM	27.7	20.0	50.4	mg/kg	114	
CDL01	Q943133	INORGANIC	CHROMIUM	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	Q943120	INORGANIC	CHROMIUM	5.00		5.01	mg/L	100	
BLA01	Q943108	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935455	SPEX	CHROMIUM	2.00		1.82	mg/L	91	
BLA02	Q935456	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q943149	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	CHROMIUM	0.020		0.0202	mg/L	101	
ICS-A	Q943147	PERKIN ELM	CHROMIUM	0.500		0.445	mg/L	89	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935459	A313427	COBALT	20.4		19.7	mg/kg		4
SPI02	Q935457	A313427	COBALT	20.4	50	58.6	mg/kg	76	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942337	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942336	NA	COBALT			.0101	mg/L		
LCS	Q935455	SPEX	COBALT	5.00		4.61	mg/L	92	
BLA02	Q935456	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942335	INORGANIC	COBALT	5.00		5.08	mg/L	102	
BLA01	Q942334	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q943139	PERKIN ELM	COPPER	0.400		0.413	mg/L	103
DUP01	Q943117	A314115	COPPER	0		BDL	mg/L	
SPI01	Q943113	A314115	COPPER	0	0.250	0.248	mg/L	99

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP02	Q935459	A313427	COPPER	26.7		24.0	mg/kg		11
SPI02	Q935457	A313427	COPPER	26.7	25.0	47.5	mg/kg	83	
CDL01	Q943133	INORGANIC	COPPER	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	COPPER	0.500		0.511	mg/L	102	
CCV	Q943120	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943108	NA	COPPER			< 0.008	mg/L		
LCS	Q935455	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q935456	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	COPPER	5.00		5.10	mg/L	102	
BLA01	Q943149	NA	COPPER			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	COPPER	0.050		0.0493	mg/L	99	
ICS-A	Q943147	PERKIN ELM	COPPER	0.500		0.455	mg/L	91	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935459	A313427	IRON	20800		21800	mg/kg		5
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943120	INORGANIC	IRON	5.00		5.37	mg/L	107	
BLA01	Q943108	NA	IRON			< 0.01	mg/L		
LCS	Q935455	SPEX	IRON	10.0		9.19	mg/L	92	
BLA02	Q935456	NA	IRON			.058	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	IRON	5.00		5.29	mg/L	106	
BLA01	Q943149	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M118.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943137	SPEX	MAGNESIUM	100		98.6	mg/L	99	
DUP01	Q943117	A314115	MAGNESIUM	15.4		15.5	mg/L		1
DUP02	Q935459	A313427	MAGNESIUM	16300		17000	mg/kg		4
SPI02	Q935457	A313427	MAGNESIUM	16300	10000	27800	mg/kg	115	
ICS-A	Q943134	PERKIN ELM	MAGNESIUM	500		467.	mg/L	93	
CCV	Q943120	INORGANIC	MAGNESIUM	50.0		49.7	mg/L	99	
BLA01	Q943108	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	MAGNESIUM	100		87.2	mg/L	87	
BLA02	Q935456	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	MAGNESIUM	50.0		49.4	mg/L	99	
BLA01	Q943149	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q943147	PERKIN ELM	MAGNESIUM	500		441.	mg/L	88	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935459	A313427	MANGANESE	366.		355.	mg/kg		3
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942337	INORGANIC	MANGANESE	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935455	SPEX	MANGANESE	5.00		4.65	mg/L	93	
BLA02	Q935456	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942335	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942334	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP01	Q943117	A314115	NICKEL	0		BDL	mg/L		
SPI01	Q943113	A314115	NICKEL	0	0.500	0.527	mg/L	105	
DUP02	Q935459	A313427	NICKEL	34.5		30.4	mg/kg		
SPI02	Q935457	A313427	NICKEL	34.5	50.0	77.7	mg/kg	86	
CDL01	Q943133	INORGANIC	NICKEL	10		9.97	mg/L	100	
ICS-A	Q943134	PERKIN ELM	NICKEL	1.00		0.910	mg/L	91	
CCV	Q943120	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943108	NA	NICKEL			< 0.004	mg/L		
LCS	Q935455	SPEX	NICKEL	5.00		4.41	mg/L	88	
BLA02	Q935456	NA	NICKEL			.0105	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	NICKEL	5.00		5.00	mg/L	100	
BLA01	Q943149	NA	NICKEL			< 0.004	mg/L		
CDL01	Q943148	PERKIN ELM	NICKEL	0.080		0.0923	mg/L	115	
ICS-A	Q943147	PERKIN ELM	NICKEL	1.00		0.847	mg/L	85	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943138	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q943137	SPEX	POTASSIUM	100		101.	mg/L	101	
DUP01	Q943117	A314115	POTASSIUM	4.92		4.89	mg/L		1
DUP02	Q935459	A313427	POTASSIUM	3180		3130	mg/kg		2
SPI02	Q935457	A313427	POTASSIUM	3180	10000	14800	mg/kg	116	
CCV	Q943120	INORGANIC	POTASSIUM	50.0		49.6	mg/L	99	
BLA01	Q943108	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	Q935456	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313434		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q943150	INORGANIC	POTASSIUM	50.0		49.5	mg/L	99	
BLA01	Q943149	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935459	A313427	SILVER	0		BDL	mg/kg		
SPI02	Q935457	A313427	SILVER	0	5.00	5.95	mg/kg	119	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942337	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942336	NA	SILVER			< 0.004	mg/L		
LCS	Q935455	SPEX	SILVER	0.500		0.454	mg/L	91	
BLA02	Q935456	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	Q942334	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935459	A313427	SODIUM	125		121	mg/kg		3
SPI02	Q935457	A313427	SODIUM	125	10000	10100	mg/kg	100	
CCV	Q942337	INORGANIC	SODIUM	50.0		52.3	mg/L	105	
BLA01	Q942336	NA	SODIUM			< 0.08	mg/L		
LCS	Q935455	SPEX	SODIUM	100		96.4	mg/L	96	
BLA02	Q935456	NA	SODIUM			.274	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942335	INORGANIC	SODIUM	50.0		51.5	mg/L	103	
BLA01	Q942334	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935459	A313427	VANADIUM	19.6		19.4	mg/kg		1
SPI02	Q935457	A313427	VANADIUM	19.6	50	74.7	mg/kg	110	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942337	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942336	NA	VANADIUM			< 0.004	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q935455	SPEX	VANADIUM	5.00		4.70	mg/L	94	
BLA02	Q935456	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q942335	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942334	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	ZINC	0.400		0.421	mg/L	105	
DUP01	Q943117	A314115	ZINC	0		BDL	mg/L		
SPI01	Q943113	A314115	ZINC	0	0.500	0.529	mg/L	106	
DUP02	Q935459	A313427	ZINC	131.		129.	mg/kg		2
SPI02	Q935457	A313427	ZINC	131.	50.0	176.	mg/kg	90	
CDL01	Q943133	INORGANIC	ZINC	10		9.89	mg/L	99	
ICS-A	Q943134	PERKIN ELM	ZINC	1.00		0.994	mg/L	99	
CCV	Q943120	INORGANIC	ZINC	5.00		5.07	mg/L	101	
BLA01	Q943108	NA	ZINC			< 0.008	mg/L		
LCS	Q935455	SPEX	ZINC	5.00		4.34	mg/L	87	
BLA02	Q935456	NA	ZINC			.0258	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q943150	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q943149	NA	ZINC			< 0.008	mg/L		
CDL01	Q943148	PERKIN ELM	ZINC	0.040		0.0421	mg/L	105	
ICS-A	Q943147	PERKIN ELM	ZINC	1.00		0.931	mg/L	93	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935459	A313427	ARSENIC	0		BDL	mg/kg		
SPI02	Q935457	A313427	ARSENIC	0	200	184.	mg/kg	92	
CDL01	Q947262	INORGANIC	ARSENIC	.5		0.502	mg/L	100	
CCV	Q947259	INORGANIC	ARSENIC	.1		0.103	mg/L	103	
BLA01	Q947258	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935460	INORGANIC	ARSENIC	.5		0.450	mg/L	90	
BLA02	Q935461	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	ARSENIC	.02		0.0222	mg/L	111	
CCV	Q947252	INORGANIC	ARSENIC	.1		0.0980	mg/L	98	
BLA01	Q947251	NA	ARSENIC			< 0.002	mg/L		

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q947266	PERKIN-ELM	SELENIUM	.04		0.0413	mg/L	103
DUP02	Q935464	A313427	SELENIUM	0		BDL	mg/kg	
SPI02	Q935462	A313427	SELENIUM	0	200	180.	mg/kg	90
CDL01	Q947262	INORGANIC	SELENIUM	.5		0.498	mg/L	100

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q947259	INORGANIC	SELENIUM	.1		0.103	mg/L	103	
BLA01	Q947258	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935460	INORGANIC	SELENIUM	.5		0.436	mg/L	87	
BLA02	Q935461	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	
CCV	Q947252	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	THALLIUM	.04		0.0417	mg/L	104	
DUP02	Q935459	A313427	THALLIUM	0		BDL	mg/kg		
SPI02	Q935457	A313427	THALLIUM	0	300	261.	mg/kg	87	
CDL01	Q947262	INORGANIC	THALLIUM	.5		0.507	mg/L	101	
CCV	Q947259	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947258	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935460	INORGANIC	THALLIUM	.5		0.459	mg/L	92	
BLA02	Q935461	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	THALLIUM	.02		.0271	mg/L	136	
CCV	Q947252	INORGANIC	THALLIUM	.1		0.102	mg/L	102	
BLA01	Q947251	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220903

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947266	PERKIN-ELM	LEAD	.04		0.0401	mg/L	100	
DUP02	Q935459	A313427	LEAD	35.3		31.1	mg/kg		13
SPI02	Q935457	A313427	LEAD	35.3	50.0	73.6	mg/kg	77	
ICS-A	Q947269	PERKIN ELM	LEAD	1		0.955	mg/L	96	
CDL01	Q947262	INORGANIC	LEAD	.5		0.501	mg/L	100	
CCV	Q947259	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q947258	NA	LEAD			< 0.002	mg/L		
LCS	Q935460	INORGANIC	LEAD	.5		0.463	mg/L	93	
BLA02	Q935461	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CDL01	Q947254	PERKIN-ELM	LEAD	.006		0.00532	mg/L	89	
ICS-A	Q947253	PERKIN ELM	LEAD	1		0.931	mg/L	93	
CCV	Q947252	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947251	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0

Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2	
DUP02	Q936188	A313444	MERCURY	0		BDL	mg/L		
SPI02	Q936186	A313424	MERCURY	0	.25	.24	mg/L	96	
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85	
CCV	Q945267		MERCURY	.003		.0031	mg/L	103.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q945268		MERCURY			< .0002	mg/L		
LCS	Q936184		MERCURY	.003		.00295	mg/L	98.3	
BLA02	Q936185		MERCURY			.0002	mg/L		
SAMPLE	A313434		See Certificate of Analysis						
CCV	Q945269		MERCURY	.003		.0028	mg/L	93.3	
BLA01	Q945270		MERCURY			< .0002	mg/L		
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 10-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0

Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5838C Run: R220050

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941759	A313431	1,1-DICHLOROETHENE	0	50	45.5	ug/kg	91	
SPI01	Q941759	A313431	TRICHLOROETHENE	0	50	46.2	ug/kg	92.4	
SPI01	Q941759	A313431	BENZENE	0	50	49.5	ug/kg	99	
SPI01	Q941759	A313431	TOLUENE	13	50	53.4	ug/kg	80.8	
SPI01	Q941759	A313431	CHLOROBENZENE	0	50	50.4	ug/kg	100.8	
DPS01	Q941760	A313431	1,1-DICHLOROETHENE	0	50	47.8	ug/kg	95.6	4.9
DPS01	Q941760	A313431	TRICHLOROETHENE	0	50	51.8	ug/kg	103.6	11.4
DPS01	Q941760	A313431	BENZENE	0	50	50.6	ug/kg	101.2	2.2
DPS01	Q941760	A313431	TOLUENE	13	50	59.9	ug/kg	93.8	14.9
DPS01	Q941760	A313431	CHLOROBENZENE	0	50	51	ug/kg	102	1.2
CCV	Q941757		See Attached Report g5830c.ind						
BLA01	Q941758		See Attached Report g5831c.ind						
SAMPLE	A313434		See Certificate of Analysis						

Comments

Q941759 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941760 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00778 Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	[illegible]
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q946018		See Attached Report g0069b.ind						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SAMPLE	A313434		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313434		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	06-JUN-94	A313435
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	08-JUL-94	5369
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	13-JUL-94	04-JUN-94 12:25

Sample Description

SAMPLE ID: D-060494-WP-033
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	0938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	0938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313435		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 13-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 14-JUN-94 — File ID: 1151 — Run: R220133

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942463		CYANIDE	.234		.224	mg/L	95.7	
ICV01	0942486		CYANIDE	.234		.227	mg/L	97	
DUP01	0942468	A312688	CYANIDE	0		BDL	mg/L		
DUP02	0942473	A313507	CYANIDE	0		BDL	mg/L		
SPI02	0942476	A313510	CYANIDE	0	.1	.102	mg/L	102	
CDL01	0942462		CYANIDE	.01		.01	mg/L	100	
CCV	0942470		CYANIDE	.1		.102	mg/L	102	
BLA01	0942471		CYANIDE			-.0002	mg/L		
BLA02	0942465		CYANIDE			.001	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	0942474		CYANIDE	.1		.102	mg/L	102	
BLA01	0942475		CYANIDE			-.0002	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935469	A313436	ALUMINUM	10800		10000	mg/kg		8
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943115	INORGANIC	ALUMINUM	5.00		5.17	mg/L	103	
BLA01	Q943114	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935465	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	Q935466	NA	ALUMINUM			.299	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q943107	INORGANIC	ALUMINUM	5.00		5.17	mg/L	103	
BLA01	Q943100	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958217	PERKIN ELM	ANTIMONY	0.400		0.423	mg/L	106	
DUP02	Q940892	A313436	ANTIMONY	0		BDL	mg/kg		
CDL01	Q958213	PERKIN ELM	ANTIMONY	0.120		0.117	mg/L	98	
CCV	Q958180	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q958179	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q940888	SPEX	ANTIMONY	5		4	mg/L	80	
BLA02	Q940889	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q958170	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	Q958169	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q958255	PERKIN ELM	ANTIMONY	0.120		0.120	mg/L	100	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	BARIUM	2.00		2.14	mg/L	107	
SPI01	Q942375	A313865	BARIUM	0.143	2.00	2.37	mg/L	111	
DUP01	Q942376	A313865	BARIUM	0.143		0.161	mg/L		12
DUP02	Q935469	A313436	BARIUM	51.3		50.0	mg/kg		3
SPI02	Q935467	A313436	BARIUM	53.6	200	254.	mg/kg	100	
CDL01	Q942391	INORGANIC	BARIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BARIUM	0.500		0.521	mg/L	104	
CCV	Q942349	INORGANIC	BARIUM	5.00		5.22	mg/L	104	
BLA01	Q942348	NA	BARIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	BARIUM	20.0		19.7	mg/L	99	
BLA02	Q935466	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	BARIUM	5.00		5.25	mg/L	105	
BLA01	Q942341	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q942350	PERKIN ELM	BARIUM	0.500		0.513	mg/L	103	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	BERYLLIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	BERYLLIUM	0	5.00	5.02	mg/kg	100	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942349	INORGANIC	BERYLLIUM	5.00		5.17	mg/L	103	
BLA01	Q942348	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935465	SPEX	BERYLLIUM	0.500		0.486	mg/L	97	
BLA02	Q935466	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	BERYLLIUM	5.00		5.21	mg/L	104	
BLA01	Q942341	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	CADMIUM	0.400		0.426	mg/L	107	
SPI01	Q942375	A313865	CADMIUM	0	0.050	0.0470	mg/L	94	
DUP01	Q942376	A313865	CADMIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	CADMIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	CADMIUM	0	5.00	3.94	mg/kg	79	
CDL01	Q942391	INORGANIC	CADMIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q942349	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	Q942348	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935470	INORGANIC	CADMIUM	.5		0.452	mg/L	90	
BLA02	Q935471	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	CADMIUM	5.00		5.08	mg/L	102	
BLA01	Q942341	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	CADMIUM	0.010		0.00777	mg/L	78	
ICS-A	Q942350	PERKIN ELM	CADMIUM	1.00		0.888	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942395	SPEX	CALCIUM	100		100.	mg/L	100	
SPI01	Q942375	A313865	CALCIUM	98.8	100	208.	mg/L	109	
DUP01	Q942376	A313865	CALCIUM	98.8		114.	mg/L		14
DUP02	Q935469	A313436	CALCIUM	8820		9120	mg/kg		3
SPI02	Q935467	A313436	CALCIUM	9090	10000	18200	mg/kg	91	
ICS-A	Q942390	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	Q942349	INORGANIC	CALCIUM	50.0		51.1	mg/L	102	
BLA01	Q942348	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	CALCIUM	100		91.4	mg/L	91	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0935466	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	0942344	INORGANIC	CALCIUM	50.0		50.8	mg/L	102	
BLA01	0942341	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0942350	PERKIN ELM	CALCIUM	500		460.	mg/L	92	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942397	PERKIN ELM	CHROMIUM	0.400		0.425	mg/L	106	
SPI01	0942375	A313865	CHROMIUM	0	0.200	0.215	mg/L	108	
DUP01	0942376	A313865	CHROMIUM	0		BDL	mg/L		
DUP02	0935469	A313436	CHROMIUM	19.4		18.4	mg/kg		5
SPI02	0935467	A313436	CHROMIUM	19.8	20.0	39.2	mg/kg	97	
CDL01	0942391	INORGANIC	CHROMIUM	10		10.3	mg/L	103	
ICS-A	0942390	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	0942349	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	0942348	NA	CHROMIUM			< 0.004	mg/L		
LCS	0935465	SPEX	CHROMIUM	2.00		1.90	mg/L	95	
BLA02	0935466	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	0942344	INORGANIC	CHROMIUM	5.00		5.16	mg/L	103	
BLA01	0942341	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	CHROMIUM	0.020		0.0206	mg/L	103	
ICS-A	0942350	PERKIN ELM	CHROMIUM	0.500		0.472	mg/L	94	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	0942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	0942376	A313865	COBALT	0		BDL	mg/L		
DUP02	0935469	A313436	COBALT	6.96		7.04	mg/kg		1
SPI02	0935467	A313436	COBALT	7.37	50.0	54.1	mg/kg	94	
CDL01	0942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	0942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	0942349	INORGANIC	COBALT	5.00		5.15	mg/L	103	
BLA01	0942348	NA	COBALT			< 0.004	mg/L		
LCS	0935465	SPEX	COBALT	5.00		4.69	mg/L	94	
BLA02	0935466	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	0942344	INORGANIC	COBALT	5.00		5.18	mg/L	104	
BLA01	0942341	NA	COBALT			< 0.004	mg/L		
CDL01	0942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	0942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COPPER	0.400		0.405	mg/L	101	
SPI01	Q942375	A313865	COPPER	0	0.250	0.260	mg/L	104	
DUP01	Q942376	A313865	COPPER	0		BDL	mg/L		
DUP02	Q935469	A313436	COPPER	18.5		17.4	mg/kg		6
SPI02	Q935467	A313436	COPPER	19.4	25.0	44.6	mg/kg	101	
CDL01	Q942391	INORGANIC	COPPER	10		10.4	mg/L	104	
ICS-A	Q942390	PERKIN ELM	COPPER	0.500		0.481	mg/L	96	
CCV	Q942349	INORGANIC	COPPER	5.00		5.30	mg/L	106	
BLA01	Q942348	NA	COPPER			< 0.008	mg/L		
LCS	Q935465	SPEX	COPPER	2.50		2.45	mg/L	98	
BLA02	Q935466	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	COPPER	5.00		5.31	mg/L	106	
BLA01	Q942341	NA	COPPER			< 0.008	mg/L		
CDL01	Q942340	PERKIN ELM	COPPER	0.050		0.0651	mg/L	130	
ICS-A	Q942350	PERKIN ELM	COPPER	0.500		0.487	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935469	A313436	IRON	15900		14800	mg/kg		7
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943115	INORGANIC	IRON	5.00		5.13	mg/L	103	
BLA01	Q943114	NA	IRON			< 0.01	mg/L		
LCS	Q935465	SPEX	IRON	10.0		9.26	mg/L	93	
BLA02	Q935466	NA	IRON			.106	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q943107	INORGANIC	IRON	5.00		5.14	mg/L	103	
BLA01	Q943100	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942395	SPEX	MAGNESIUM	100		101.	mg/L	101	
SPI01	Q942375	A313865	MAGNESIUM	30.2	100	139.	mg/L	109	
DUP01	Q942376	A313865	MAGNESIUM	30.2		35.5	mg/L		16
DUP02	Q935469	A313436	MAGNESIUM	6320		6510	mg/kg		3
SPI02	Q935467	A313436	MAGNESIUM	6630	10000	16200	mg/kg	96	
ICS-A	Q942390	PERKIN ELM	MAGNESIUM	500		484.	mg/L	97	
CCV	Q942349	INORGANIC	MAGNESIUM	50.0		52.1	mg/L	104	
BLA01	Q942348	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	MAGNESIUM	100		93.0	mg/L	93	
BLA02	Q935466	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313435		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942344	INORGANIC	MAGNESIUM	50.0		51.9	mg/L	104	
BLA01	Q942341	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q942350	PERKIN ELM	MAGNESIUM	500		479.	mg/L	96	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935469	A313436	MANGANESE	418.		438.	mg/kg		5
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942349	INORGANIC	MANGANESE	5.00		5.18	mg/L	104	
BLA01	Q942348	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935465	SPEX	MANGANESE	5.00		4.72	mg/L	94	
BLA02	Q935466	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942341	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	NICKEL	0	0.500	0.513	mg/L	103	
DUP01	Q942376	A313865	NICKEL	0		BDL	mg/L		
DUP02	Q935469	A313436	NICKEL	19.6		17.6	mg/kg		11
SPI02	Q935467	A313436	NICKEL	19.1	50.0	64.9	mg/kg	92	
CDL01	Q942391	INORGANIC	NICKEL	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	NICKEL	1.00		0.926	mg/L	93	
CCV	Q942349	INORGANIC	NICKEL	5.00		5.08	mg/L	102	
BLA01	Q942348	NA	NICKEL			< 0.004	mg/L		
LCS	Q935465	SPEX	NICKEL	5.00		4.62	mg/L	92	
BLA02	Q935466	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	NICKEL	5.00		5.10	mg/L	102	
BLA01	Q942341	NA	NICKEL			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	NICKEL	0.080		0.103	mg/L	129	
ICS-A	Q942350	PERKIN ELM	NICKEL	1.00		0.897	mg/L	90	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	POTASSIUM	20.0		20.7	mg/L	104	
ICV01	Q942395	SPEX	POTASSIUM	100		105.	mg/L	105	
SPI01	Q942375	A313865	POTASSIUM	2.14	100	112.	mg/L	110	
DUP02	Q935469	A313436	POTASSIUM	1920		1980	mg/kg		3
SPI02	Q935467	A313436	POTASSIUM	2040	10000	12100	mg/kg	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942349	INORGANIC	POTASSIUM	50.0		53.3	mg/L	107	
BLA01	Q942348	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	POTASSIUM	100		97.3	mg/L	97	
BLA02	Q935466	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	POTASSIUM	50.0		53.1	mg/L	106	
BLA01	Q942341	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935469	A313436	SILVER	0		BDL	mg/kg		
SPI02	Q935467	A313436	SILVER	0	5.00	5.49	mg/kg	110	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942349	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942348	NA	SILVER			< 0.004	mg/L		
LCS	Q935465	SPEX	SILVER	0.500		0.457	mg/L	91	
BLA02	Q935466	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942341	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935469	A313436	SODIUM	140.		132.	mg/kg		6
SPI02	Q935467	A313436	SODIUM	154.	10000	10200	mg/kg	101	
CCV	Q942349	INORGANIC	SODIUM	50.0		52.9	mg/L	106	
BLA01	Q942348	NA	SODIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	SODIUM	100		98.2	mg/L	98	
BLA02	Q935466	NA	SODIUM			.279	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	SODIUM	50.0		52.8	mg/L	106	
BLA01	Q942341	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	VANADIUM	19.0		18.2	mg/kg		4

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q935467	A313436	VANADIUM	19.8	50.0	68.6	mg/kg	98	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942349	INORGANIC	VANADIUM	5.00		5.19	mg/L	104	
BLA01	Q942348	NA	VANADIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	VANADIUM	5.00		4.77	mg/L	95	
BLA02	Q935466	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	VANADIUM	5.00		5.23	mg/L	105	
BLA01	Q942341	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	ZINC	0.400		0.413	mg/L	103	
SPI01	Q942375	A313865	ZINC	0	0.500	0.521	mg/L	104	
DUP01	Q942376	A313865	ZINC	0		BDL	mg/L		
DUP02	Q935469	A313436	ZINC	119.		110.	mg/kg		8
SPI02	Q935467	A313436	ZINC	121.	50.0	165.	mg/kg	88	
CDL01	Q942391	INORGANIC	ZINC	10		9.86	mg/L	99	
ICS-A	Q942390	PERKIN ELM	ZINC	1.00		0.984	mg/L	98	
CCV	Q942349	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q942348	NA	ZINC			< 0.008	mg/L		
LCS	Q935465	SPEX	ZINC	5.00		4.45	mg/L	89	
BLA02	Q935466	NA	ZINC			.0321	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q942344	INORGANIC	ZINC	5.00		5.04	mg/L	101	
BLA01	Q942341	NA	ZINC			< 0.008	mg/L		
CDL01	Q942340	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	Q942350	PERKIN ELM	ZINC	1.00		0.964	mg/L	96	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935469	A313436	ARSENIC	0		BDL	mg/kg		
SPI02	Q935467	A313436	ARSENIC	0	200	186.	mg/kg	93	
CDL01	Q947356	INORGANIC	ARSENIC	.5		0.495	mg/L	99	
CCV	Q947355	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947354	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935470	INORGANIC	ARSENIC	.5		.433	mg/L	86.6	
BLA02	Q935471	NA	ARSENIC			< .005	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q947351	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947350	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	ARSENIC	.02		0.0227	mg/L	114	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	SELENIUM	.04		0.0405	mg/L	101	
DUP02	Q935474	A313436	SELENIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	SELENIUM	21.7	200	208.	mg/kg	93	
CDL01	Q947356	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	Q947355	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947354	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935470	INORGANIC	SELENIUM	.5		.423	mg/L	84.6	
BLA02	Q935471	NA	SELENIUM			< .01	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q947351	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q947350	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	THALLIUM	.04		0.0434	mg/L	109	
DUP02	Q935469	A313436	THALLIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	THALLIUM	0	300	252.	mg/kg	84	
CDL01	Q947356	INORGANIC	THALLIUM	.5		0.506	mg/L	101	
CCV	Q947355	INORGANIC	THALLIUM	.1		0.104	mg/L	104	
BLA01	Q947354	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935470	INORGANIC	THALLIUM	.5		0.457	mg/L	91	
BLA02	Q935471	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q947351	INORGANIC	THALLIUM	.1		0.105	mg/L	105	
BLA01	Q947350	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947349	PERKIN-ELM	THALLIUM	.02		.0269	mg/L	135	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q935469	A313436	LEAD	29.8		28.3	mg/kg		5
SPI02	Q935467	A313436	LEAD	30.4	50.0	76.2	mg/kg	92	
ICS-A	Q947369	PERKIN ELM	LEAD	1		0.957	mg/L	96	
CDL01	Q947356	INORGANIC	LEAD	.5		0.497	mg/L	99	
CCV	Q947355	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947354	NA	LEAD			< 0.002	mg/L		
LCS	Q935470	INORGANIC	LEAD	.5		0.460	mg/L	92	
BLA02	Q935471	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313435		See Certificate of Analysis						
CCV	Q947351	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947350	NA	LEAD			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	LEAD	.006		0.00570	mg/L	95	
ICS-A	Q947348	PERKIN ELM	LEAD	1		0.937	mg/L	94	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2
DUP02	Q936193	A313435	MERCURY	0		BDL	mg/L	
SPI02	Q936191	A313435	MERCURY	0	.25	.262	mg/L	104.8
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85
CCV	Q945263		MERCURY	.003		.00298	mg/L	99.3
BLA01	Q945264		MERCURY			< .0002	mg/L	
LCS	Q936189		MERCURY	.003		.00298	mg/L	99.3
BLA02	Q936190		MERCURY			< .0002	mg/L	
SAMPLE	A313435		See Certificate of Analysis					
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3
BLA01	Q945266		MERCURY			< .0002	mg/L	
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : M. WILLIAMS Analysis Date: 10-JUN-94 Instrument: GC/MS VOA Test: O510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5839C Run: R220050

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941759	A313431	1,1-DICHLOROETHENE	0	50	45.5	ug/kg	91	
SPI01	Q941759	A313431	TRICHLOROETHENE	0	50	46.2	ug/kg	92.4	
SPI01	Q941759	A313431	BENZENE	0	50	49.5	ug/kg	99	
SPI01	Q941759	A313431	TOLUENE	13	50	53.4	ug/kg	80.8	
SPI01	Q941759	A313431	CHLOROBENZENE	0	50	50.4	ug/kg	100.8	
DPS01	Q941760	A313431	1,1-DICHLOROETHENE	0	50	47.8	ug/kg	95.6	4.9
DPS01	Q941760	A313431	TRICHLOROETHENE	0	50	51.8	ug/kg	103.6	4
DPS01	Q941760	A313431	BENZENE	0	50	50.6	ug/kg	101.2	
DPS01	Q941760	A313431	TOLUENE	13	50	59.9	ug/kg	93.8	14.9
DPS01	Q941760	A313431	CHLOROBENZENE	0	50	51	ug/kg	102	1.2
CCV	Q941757		See Attached Report g5830c.ind						
BLA01	Q941758		See Attached Report g5831c.ind						
SAMPLE	A313435		See Certificate of Analysis						

Comments

Q941759 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941760 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: O505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00788 Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	4.2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
CCV	Q946018		See Attached Report g0069b.ind						
SAMPLE	A313435		See Certificate of Analysis						

Comments

Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
BLA02	Q940527		ALPHA-BHC			< .0032	mg/L		
BLA02	Q940527		BETA-BHC			< .0032	mg/L		
BLA02	Q940527		DELTA-BHC			< .0032	mg/L		
BLA02	Q940527		GAMMA-BHC (LINDANE)			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR			< .0032	mg/L		
BLA02	Q940527		ALDRIN			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR EPOXIDE			< .0032	mg/L		
BLA02	Q940527		ENDOSULFAN I			< .0032	mg/L		
BLA02	Q940527		DIELDRIN			< .0064	mg/L		
BLA02	Q940527		4,4'-DDE			< .0064	mg/L		
BLA02	Q940527		ENDRIN			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN II			< .0064	mg/L		
BLA02	Q940527		4,4'-DDD			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN SULFATE			< .0064	mg/L		
BLA02	Q940527		4,4'-DDT			< .0064	mg/L		
BLA02	Q940527		METHOXYCHLOR			< .032	mg/L		
BLA02	Q940527		ENDRIN KETONE			< .0064	mg/L		
BLA02	Q940527		ALPHA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		GAMMA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		TOXAPHENE			< .064	mg/L		
BLA02	Q940527		PCB AROCHLOR 1016			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1221			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1232			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1242			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1248			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1254			< .064	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313435

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q940527		PCB AROCHLOR 1260			< .064	mg/L		
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313435		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Hennwerler

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313436
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 14:25

Sample Description

SAMPLE ID: D-060494-WP-037
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	0938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	0938592	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2070	mg/kg	103.5	
DPS01	0938593	A313431	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1.9
CDL01	0938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	0938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	0938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	0938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	0937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313436		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 13-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 14-JUN-94 — File ID: 1151 — Run: R220133
Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942463		CYANIDE	.234		.224	mg/L	95.7	
ICV01	0942486		CYANIDE	.234		.227	mg/L	97	
DUP01	0942468	A312688	CYANIDE	0		BDL	mg/L		
DUP02	0942473	A313507	CYANIDE	0		BDL	mg/L		
SPI02	0942476	A313510	CYANIDE	0	.1	.102	mg/L	102	
CDL01	0942462		CYANIDE	.01		.01	mg/L	100	
CCV	0942470		CYANIDE	.1		.102	mg/L	102	
BLA01	0942471		CYANIDE			-.0002	mg/L		
BLA02	0942465		CYANIDE			.001	mg/L		
LFB02	0942472		CYANIDE	.3		.241	mg/L	80.3	
SAMPLE	A313436		See Certificate of Analysis						
CCV	0942474		CYANIDE	.1		.102	mg/L	102	
BLA01	0942475		CYANIDE			-.0002	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935469	A313436	ALUMINUM	10800		10000	mg/kg		8
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943128	INORGANIC	ALUMINUM	5.00		5.16	mg/L	103	
BLA01	Q943127	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935465	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	Q935466	NA	ALUMINUM			.299	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q943116	INORGANIC	ALUMINUM	5.00		5.46	mg/L	109	
BLA01	Q943114	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958217	PERKIN ELM	ANTIMONY	0.400		0.423	mg/L	106	
DUP02	Q940892	A313436	ANTIMONY	0		BDL	mg/kg		
CDL01	Q958213	PERKIN ELM	ANTIMONY	0.120		0.117	mg/L	98	
CCV	Q958180	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q958179	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q940888	SPEX	ANTIMONY	5		4	mg/L	80	
BLA02	Q940889	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q958170	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	Q958169	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q958255	PERKIN ELM	ANTIMONY	0.120		0.120	mg/L	100	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	BARIUM	2.00		2.14	mg/L	107	
SPI01	Q942375	A313865	BARIUM	0.143	2.00	2.37	mg/L	111	
DUP01	Q942376	A313865	BARIUM	0.143		0.161	mg/L		12
DUP02	Q935469	A313436	BARIUM	51.3		50.0	mg/kg		3
SPI02	Q935467	A313436	BARIUM	53.6	200	254.	mg/kg	100	
CDL01	Q942391	INORGANIC	BARIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BARIUM	0.500		0.521	mg/L	104	
CCV	Q942361	INORGANIC	BARIUM	5.00		5.17	mg/L	103	
BLA01	Q942360	NA	BARIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	BARIUM	20.0		19.7	mg/L	99	
BLA02	Q935466	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	BARIUM	5.00		5.22	mg/L	104	
BLA01	Q942348	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q942350	PERKIN ELM	BARIUM	0.500		0.513	mg/L	103	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	BERYLLIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	BERYLLIUM	0	5.00	5.02	mg/kg	100	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942361	INORGANIC	BERYLLIUM	5.00		5.17	mg/L	103	
BLA01	Q942360	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935465	SPEX	BERYLLIUM	0.500		0.486	mg/L	97	
BLA02	Q935466	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	BERYLLIUM	5.00		5.17	mg/L	103	
BLA01	Q942348	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	CADMIUM	0.400		0.426	mg/L	107	
SPI01	Q942375	A313865	CADMIUM	0	0.050	0.0470	mg/L	94	
DUP01	Q942376	A313865	CADMIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	CADMIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	CADMIUM	0	5.00	3.94	mg/kg	79	
CDL01	Q942391	INORGANIC	CADMIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q942361	INORGANIC	CADMIUM	5.00		5.04	mg/L	101	
BLA01	Q942360	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935470	INORGANIC	CADMIUM	.5		0.452	mg/L	90	
BLA02	Q935471	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	CADMIUM	5.00		5.06	mg/L	101	
BLA01	Q942348	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	CADMIUM	0.010		0.00777	mg/L	78	
ICS-A	Q942350	PERKIN ELM	CADMIUM	1.00		0.888	mg/L	89	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942395	SPEX	CALCIUM	100		100.	mg/L	100	
SPI01	Q942375	A313865	CALCIUM	98.8	100	208.	mg/L	109	
DUP01	Q942376	A313865	CALCIUM	98.8		114.	mg/L		14
DUP02	Q935469	A313436	CALCIUM	8820		9120	mg/kg		3
SPI02	Q935467	A313436	CALCIUM	9090	10000	18200	mg/kg	91	
ICS-A	Q942390	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	Q942361	INORGANIC	CALCIUM	50.0		49.9	mg/L	100	
BLA01	Q942360	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	CALCIUM	100		91.4	mg/L	91	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q935466	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	CALCIUM	50.0		51.1	mg/L	102	
BLA01	Q942348	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q942350	PERKIN ELM	CALCIUM	500		460.	mg/L	92	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	CHROMIUM	0.400		0.425	mg/L	106	
SPI01	Q942375	A313865	CHROMIUM	0	0.200	0.215	mg/L	108	
DUP01	Q942376	A313865	CHROMIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	CHROMIUM	19.4		18.4	mg/kg		5
SPI02	Q935467	A313436	CHROMIUM	19.8	20.0	39.2	mg/kg	97	
CDL01	Q942391	INORGANIC	CHROMIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	Q942361	INORGANIC	CHROMIUM	5.00		5.09	mg/L	102	
BLA01	Q942360	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	CHROMIUM	2.00		1.90	mg/L	95	
BLA02	Q935466	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	Q942348	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	CHROMIUM	0.020		0.0206	mg/L	103	
ICS-A	Q942350	PERKIN ELM	CHROMIUM	0.500		0.472	mg/L	94	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935469	A313436	COBALT	6.96		7.04	mg/kg		1
SPI02	Q935467	A313436	COBALT	7.37	50.0	54.1	mg/kg	94	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942361	INORGANIC	COBALT	5.00		5.09	mg/L	102	
BLA01	Q942360	NA	COBALT			< 0.004	mg/L		
LCS	Q935465	SPEX	COBALT	5.00		4.69	mg/L	94	
BLA02	Q935466	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	COBALT	5.00		5.15	mg/L	103	
BLA01	Q942348	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942397	PERKIN ELM	COPPER	0.400		0.405	mg/L	101	
SPI01	0942375	A313865	COPPER	0	0.250	0.260	mg/L	104	
DUP01	0942376	A313865	COPPER	0		BDL	mg/L		
DUP02	0935469	A313436	COPPER	18.5		17.4	mg/kg		6
SPI02	0935467	A313436	COPPER	19.4	25.0	44.6	mg/kg	101	
CDL01	0942391	INORGANIC	COPPER	10		10.4	mg/L	104	
ICS-A	0942390	PERKIN ELM	COPPER	0.500		0.481	mg/L	96	
CCV	0942361	INORGANIC	COPPER	5.00		5.24	mg/L	105	
BLA01	0942360	NA	COPPER			< 0.008	mg/L		
LCS	0935465	SPEX	COPPER	2.50		2.45	mg/L	98	
BLA02	0935466	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0942349	INORGANIC	COPPER	5.00		5.30	mg/L	106	
BLA01	0942348	NA	COPPER			< 0.008	mg/L		
CDL01	0942340	PERKIN ELM	COPPER	0.050		0.0651	mg/L	130	
ICS-A	0942350	PERKIN ELM	COPPER	0.500		0.487	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	0943117	A314115	IRON	0		BDL	mg/L		
SPI01	0943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	0935469	A313436	IRON	15900		14800	mg/kg		7
CDL01	0943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	0943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	0943128	INORGANIC	IRON	5.00		5.04	mg/L	101	
BLA01	0943127	NA	IRON			< 0.01	mg/L		
LCS	0935465	SPEX	IRON	10.0		9.26	mg/L	93	
BLA02	0935466	NA	IRON			.106	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0943116	INORGANIC	IRON	5		5.51	mg/L	110	
BLA01	0943114	NA	IRON			< 0.01	mg/L		
ICS-A	0943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0942395	SPEX	MAGNESIUM	100		101.	mg/L	101	
SPI01	0942375	A313865	MAGNESIUM	30.2	100	139.	mg/L	109	
DUP01	0942376	A313865	MAGNESIUM	30.2		35.5	mg/L		16
DUP02	0935469	A313436	MAGNESIUM	6320		6510	mg/kg		3
SPI02	0935467	A313436	MAGNESIUM	6630	10000	16200	mg/kg	96	
ICS-A	0942390	PERKIN ELM	MAGNESIUM	500		484.	mg/L	97	
CCV	0942361	INORGANIC	MAGNESIUM	50.0		50.6	mg/L	101	
BLA01	0942360	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0935465	SPEX	MAGNESIUM	100		93.0	mg/L	93	
BLA02	0935466	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313436		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942349	INORGANIC	MAGNESIUM	50.0		52.1	mg/L	104	
BLA01	Q942348	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q942350	PERKIN ELM	MAGNESIUM	500		479.	mg/L	96	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935469	A313436	MANGANESE	418.		438.	mg/kg		5
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942361	INORGANIC	MANGANESE	5.00		5.11	mg/L	102	
BLA01	Q942360	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935465	SPEX	MANGANESE	5.00		4.72	mg/L	94	
BLA02	Q935466	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	MANGANESE	5.00		5.18	mg/L	104	
BLA01	Q942348	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	NICKEL	0	0.500	0.513	mg/L	103	
DUP01	Q942376	A313865	NICKEL	0		BDL	mg/L		
DUP02	Q935469	A313436	NICKEL	19.6		17.6	mg/kg		11
SPI02	Q935467	A313436	NICKEL	19.1	50.0	64.9	mg/kg	92	
CDL01	Q942391	INORGANIC	NICKEL	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	NICKEL	1.00		0.926	mg/L	93	
CCV	Q942361	INORGANIC	NICKEL	5.00		5.04	mg/L	101	
BLA01	Q942360	NA	NICKEL			< 0.004	mg/L		
LCS	Q935465	SPEX	NICKEL	5.00		4.62	mg/L	92	
BLA02	Q935466	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	NICKEL	5.00		5.08	mg/L	102	
BLA01	Q942348	NA	NICKEL			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	NICKEL	0.080		0.103	mg/L	129	
ICS-A	Q942350	PERKIN ELM	NICKEL	1.00		0.897	mg/L	90	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	POTASSIUM	20.0		20.7	mg/L	104	
ICV01	Q942395	SPEX	POTASSIUM	100		105.	mg/L	105	
SPI01	Q942375	A313865	POTASSIUM	2.14	100	112.	mg/L	110	
DUP02	Q935469	A313436	POTASSIUM	1920		1980	mg/kg		3
SPI02	Q935467	A313436	POTASSIUM	2040	10000	12100	mg/kg	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942361	INORGANIC	POTASSIUM	50.0		51.7	mg/L	103	
BLA01	Q942360	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	POTASSIUM	100		97.3	mg/L	97	
BLA02	Q935466	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	POTASSIUM	50.0		53.3	mg/L	107	
BLA01	Q942348	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935469	A313436	SILVER	0		BDL	mg/kg		
SPI02	Q935467	A313436	SILVER	0	5.00	5.49	mg/kg	110	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942361	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q942360	NA	SILVER			< 0.004	mg/L		
LCS	Q935465	SPEX	SILVER	0.500		0.457	mg/L	91	
BLA02	Q935466	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942348	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935469	A313436	SODIUM	140.		132.	mg/kg		6
SPI02	Q935467	A313436	SODIUM	154.	10000	10200	mg/kg	101	
CCV	Q942361	INORGANIC	SODIUM	50.0		51.9	mg/L	104	
BLA01	Q942360	NA	SODIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	SODIUM	100		98.2	mg/L	98	
BLA02	Q935466	NA	SODIUM			.279	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	SODIUM	50.0		52.9	mg/L	106	
BLA01	Q942348	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	VANADIUM	19.0		18.2	mg/kg		4

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q935467	A313436	VANADIUM	19.8	50.0	68.6	mg/kg	98	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942361	INORGANIC	VANADIUM	5.00		5.14	mg/L	103	
BLA01	Q942360	NA	VANADIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	VANADIUM	5.00		4.77	mg/L	95	
BLA02	Q935466	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	VANADIUM	5.00		5.19	mg/L	104	
BLA01	Q942348	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	ZINC	0.400		0.413	mg/L	103	
SPI01	Q942375	A313865	ZINC	0	0.500	0.521	mg/L	104	
DUP01	Q942376	A313865	ZINC	0		BDL	mg/L		
DUP02	Q935469	A313436	ZINC	119.		110.	mg/kg		8
SPI02	Q935467	A313436	ZINC	121.	50.0	165.	mg/kg	88	
CDL01	Q942391	INORGANIC	ZINC	10		9.86	mg/L	99	
ICS-A	Q942390	PERKIN ELM	ZINC	1.00		0.984	mg/L	98	
CCV	Q942361	INORGANIC	ZINC	5.00		4.92	mg/L	98	
BLA01	Q942360	NA	ZINC			< 0.008	mg/L		
LCS	Q935465	SPEX	ZINC	5.00		4.45	mg/L	89	
BLA02	Q935466	NA	ZINC			.0321	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q942349	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q942348	NA	ZINC			< 0.008	mg/L		
CDL01	Q942340	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	Q942350	PERKIN ELM	ZINC	1.00		0.964	mg/L	96	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935469	A313436	ARSENIC	0		BDL	mg/kg		
SPI02	Q935467	A313436	ARSENIC	0	200	186.	mg/kg	93	
CDL01	Q947356	INORGANIC	ARSENIC	.5		0.495	mg/L	99	
CCV	Q947355	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947354	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935470	INORGANIC	ARSENIC	.5		.433	mg/L	86.6	
BLA02	Q935471	NA	ARSENIC			< .005	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	Q947351	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947350	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	ARSENIC	.02		0.0227	mg/L	114	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947366	PERKIN-ELM	SELENIUM	.04		0.0405	mg/L	101	
DUP02	0935474	A313436	SELENIUM	0		BDL	mg/kg		
SPI02	0935467	A313436	SELENIUM	21.7	200	208.	mg/kg	93	
CDL01	0947356	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	0947355	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	0947354	NA	SELENIUM			< 0.002	mg/L		
LCS	0935470	INORGANIC	SELENIUM	.5		.423	mg/L	84.6	
BLA02	0935471	NA	SELENIUM			< .01	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0947351	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	0947350	NA	SELENIUM			< 0.002	mg/L		
CDL01	0947349	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947366	PERKIN-ELM	THALLIUM	.04		0.0434	mg/L	109	
DUP02	0935469	A313436	THALLIUM	0		BDL	mg/kg		
SPI02	0935467	A313436	THALLIUM	0	300	252.	mg/kg	84	
CDL01	0947356	INORGANIC	THALLIUM	.5		0.506	mg/L	101	
CCV	0947355	INORGANIC	THALLIUM	.1		0.104	mg/L	104	
BLA01	0947354	NA	THALLIUM			< 0.004	mg/L		
LCS	0935470	INORGANIC	THALLIUM	.5		0.457	mg/L	91	
BLA02	0935471	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0947351	INORGANIC	THALLIUM	.1		0.105	mg/L	105	
BLA01	0947350	NA	THALLIUM			< 0.004	mg/L		
CDL01	0947349	PERKIN-ELM	THALLIUM	.02		.0269	mg/L	135	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0947366	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	0935469	A313436	LEAD	29.8		28.3	mg/kg		5
SPI02	0935467	A313436	LEAD	30.4	50.0	76.2	mg/kg	92	
ICS-A	0947369	PERKIN ELM	LEAD	1		0.957	mg/L	96	
CDL01	0947356	INORGANIC	LEAD	.5		0.497	mg/L	99	
CCV	0947355	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	0947354	NA	LEAD			< 0.002	mg/L		
LCS	0935470	INORGANIC	LEAD	.5		0.460	mg/L	92	
BLA02	0935471	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313436		See Certificate of Analysis						
CCV	0947351	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	0947350	NA	LEAD			< 0.002	mg/L		
CDL01	0947349	PERKIN-ELM	LEAD	.006		0.00570	mg/L	95	
ICS-A	0947348	PERKIN ELM	LEAD	1		0.937	mg/L	94	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2
DUP02	Q936193	A313435	MERCURY	0		BDL	mg/L	
SPI02	Q936191	A313435	MERCURY	0	.25	.262	mg/L	104.8
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85
CCV	Q945263		MERCURY	.003		.00298	mg/L	99.3
BLA01	Q945264		MERCURY			< .0002	mg/L	
LCS	Q936189		MERCURY	.003		.00298	mg/L	99.3
BLA02	Q936190		MERCURY			< .0002	mg/L	
SAMPLE	A313436		See Certificate of Analysis					
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3
BLA01	Q945266		MERCURY			< .0002	mg/L	
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 11-JUN-94 Instrument: GC/MS VOA Test: O510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5859C Run: R220018

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941332	A313432	1,1-DICHLOROETHENE	0	50	50.9	ug/kg	101.8	
SPI01	Q941332	A313432	TRICHLOROETHENE	0	50	50.8	ug/kg	101.6	
SPI01	Q941332	A313432	BENZENE	0	50	54.8	ug/kg	109.6	
SPI01	Q941332	A313432	TOLUENE	0	50	54.5	ug/kg	109	
SPI01	Q941332	A313432	CHLOROBENZENE	0	50	50	ug/kg	100	
DPS01	Q941333	A313432	1,1-DICHLOROETHENE	0	50	49.1	ug/kg	98.2	3.6
DPS01	Q941333	A313432	TRICHLOROETHENE	0	50	52.3	ug/kg	104.6	[illegible].9
DPS01	Q941333	A313432	BENZENE	0	50	55.2	ug/kg	110.4	
DPS01	Q941333	A313432	TOLUENE	0	50	51.7	ug/kg	103.4	5.3
DPS01	Q941333	A313432	CHLOROBENZENE	0	50	48.9	ug/kg	97.8	2.2
CCV	Q941327		See Attached Report g5850c.ind						
SAMPLE	A313436		See Certificate of Analysis						

Comments

Q941332 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941333 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 16-JUN-94 Instrument: GC/MS SVOA Test: O505.3.0
Reviewer: A. BRADBURN Review Date: 17-JUN-94 File ID: >00798 Run: R220662

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	4.2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	[illegible]2
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
CCV	Q946018		See Attached Report g0069b.ind						
SAMPLE	A313436		See Certificate of Analysis						

Comments

Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.3
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.9
BLA02	Q940527		ALPHA-BHC			< .0032	mg/L		
BLA02	Q940527		BETA-BHC			< .0032	mg/L		
BLA02	Q940527		DELTA-BHC			< .0032	mg/L		
BLA02	Q940527		GAMMA-BHC (LINDANE)			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR			< .0032	mg/L		
BLA02	Q940527		ALDRIN			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR EPOXIDE			< .0032	mg/L		
BLA02	Q940527		ENDOSULFAN I			< .0032	mg/L		
BLA02	Q940527		DIELDRIN			< .0064	mg/L		
BLA02	Q940527		4,4'-DDE			< .0064	mg/L		
BLA02	Q940527		ENDRIN			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN II			< .0064	mg/L		
BLA02	Q940527		4,4'-DDD			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN SULFATE			< .0064	mg/L		
BLA02	Q940527		4,4'-DDT			< .0064	mg/L		
BLA02	Q940527		METHOXYCHLOR			< .032	mg/L		
BLA02	Q940527		ENDRIN KETONE			< .0064	mg/L		
BLA02	Q940527		ALPHA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		GAMMA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		TOXAPHENE			< .064	mg/L		
BLA02	Q940527		PCB AROCHLOR 1016			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1221			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1232			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1242			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1248			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1254			< .064	mg/L		
BLA02	Q940527		PCB AROCHLOR 1260			< .064	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A313436

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313436		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: N. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	06-JUN-94	A313437
	Complete	PO Number
	08-JUL-94	5369
	Printed	Sampled
	13-JUL-94	04-JUN-94 15:25

Sample Description

SAMPLE ID: D-060494-WP-041
DESCRIPTION: SOIL
PROJECT NAME: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 08-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: P. ANDERSON — Review Date: 08-JUN-94 — File ID: 2010-2011 — Run: R219542

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q938590		TOTAL ORGANIC CARBON (TOC)	46.2		44.1	mg/L	95.5	
ICV01	Q938601		TOTAL ORGANIC CARBON (TOC)	46.2		49.4	mg/L	106.9	
SPI01	Q938598	A313437	TOTAL ORGANIC CARBON (TOC)	0	2000	2030	mg/kg	101.5	
DPS01	Q938599	A313437	TOTAL ORGANIC CARBON (TOC)	0	2000	2160	mg/kg	108	6.2
CDL01	Q938589		TOTAL ORGANIC CARBON (TOC)	10		11	mg/L	110	
CCV	Q938594		TOTAL ORGANIC CARBON (TOC)	50		53.4	mg/L	106.8	
BLA01	Q938595		TOTAL ORGANIC CARBON (TOC)			-.307	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q938600		TOTAL ORGANIC CARBON (TOC)	50		52	mg/L	104	
BLA01	Q938602		TOTAL ORGANIC CARBON (TOC)			.303	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 06-JUN-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 07-JUN-94 — File ID: 3916-3920 — Run: R219418

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q938422	A313436	SOLIDS	69		71	Percent		2.9
LCS01	Q937578		SOLIDS	11.3727		11.3729	Grams	100	
SAMPLE	A313437		See Certificate of Analysis						

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 13-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: B. SHRAKE — Review Date: 14-JUN-94 — File ID: 1151 — Run: R220133
Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942463		CYANIDE	.234		.224	mg/L	95.7	
ICV01	Q942486		CYANIDE	.234		.227	mg/L	97	
DUP01	Q942468	A312688	CYANIDE	0		BDL	mg/L		
DUP02	Q942473	A313507	CYANIDE	0		BDL	mg/L		
SPI02	Q942476	A313510	CYANIDE	0	.1	.102	mg/L	102	
CDL01	Q942462		CYANIDE	.01		.01	mg/L	100	
CCV	Q942470		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942471		CYANIDE			-.0002	mg/L		
BLA02	Q942465		CYANIDE			.001	mg/L		
LFB02	Q942472		CYANIDE	.3		.241	mg/L	80.3	
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942474		CYANIDE	.1		.102	mg/L	102	
BLA01	Q942475		CYANIDE			-.0002	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q943138	PERKIN ELM	ALUMINUM	2.00		2.05	mg/L	103	
DUP01	Q943117	A314115	ALUMINUM	0		BDL	mg/L		
SPI01	Q943113	A314115	ALUMINUM	0	2.00	2.18	mg/L	109	
DUP02	Q935469	A313436	ALUMINUM	10800		10000	mg/kg		8
CDL01	Q943133	INORGANIC	ALUMINUM	10		9.99	mg/L	100	
ICS-A	Q943134	PERKIN ELM	ALUMINUM	500		500.	mg/L	100	
CCV	Q943115	INORGANIC	ALUMINUM	5.00		5.17	mg/L	103	
BLA01	Q943114	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q935465	SPEX	ALUMINUM	20.0		18.7	mg/L	94	
BLA02	Q935466	NA	ALUMINUM			.299	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q943107	INORGANIC	ALUMINUM	5.00		5.17	mg/L	103	
BLA01	Q943100	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q943147	PERKIN ELM	ALUMINUM	500		475.	mg/L	95	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958217	PERKIN ELM	ANTIMONY	0.400		0.423	mg/L	106	
DUP02	Q940892	A313436	ANTIMONY	0		BDL	mg/kg		
CDL01	Q958213	PERKIN ELM	ANTIMONY	0.120		0.117	mg/L	98	
CCV	Q958190	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q958189	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q940888	SPEX	ANTIMONY	5		4	mg/L	80	
BLA02	Q940889	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q958188	INORGANIC	ANTIMONY	1.00		1.04	mg/L	104	
BLA01	Q958187	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q958255	PERKIN ELM	ANTIMONY	0.120		0.120	mg/L	100	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	BARIUM	2.00		2.14	mg/L	107	
SPI01	Q942375	A313865	BARIUM	0.143	2.00	2.37	mg/L	111	
DUP01	Q942376	A313865	BARIUM	0.143		0.161	mg/L		12
DUP02	Q935469	A313436	BARIUM	51.3		50.0	mg/kg		3
SPI02	Q935467	A313436	BARIUM	53.6	200	254.	mg/kg	100	
CDL01	Q942391	INORGANIC	BARIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BARIUM	0.500		0.521	mg/L	104	
CCV	Q942349	INORGANIC	BARIUM	5.00		5.22	mg/L	104	
BLA01	Q942348	NA	BARIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	BARIUM	20.0		19.7	mg/L	99	
BLA02	Q935466	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	BARIUM	5.00		5.25	mg/L	105	
BLA01	Q942341	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q942350	PERKIN ELM	BARIUM	0.500		0.513	mg/L	103	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	BERYLLIUM	0.400		0.417	mg/L	104	
SPI01	Q942375	A313865	BERYLLIUM	0	0.050	0.0502	mg/L	100	
DUP01	Q942376	A313865	BERYLLIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	BERYLLIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	BERYLLIUM	0	5.00	5.02	mg/kg	100	
CDL01	Q942391	INORGANIC	BERYLLIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	BERYLLIUM	0.500		0.509	mg/L	102	
CCV	Q942349	INORGANIC	BERYLLIUM	5.00		5.17	mg/L	103	
BLA01	Q942348	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q935465	SPEX	BERYLLIUM	0.500		0.486	mg/L	97	
BLA02	Q935466	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	BERYLLIUM	5.00		5.21	mg/L	104	
BLA01	Q942341	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q942340	PERKIN ELM	BERYLLIUM	0.010		0.00924	mg/L	92	
ICS-A	Q942350	PERKIN ELM	BERYLLIUM	0.500		0.489	mg/L	98	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	CADMIUM	0.400		0.425	mg/L	106	
DUP01	Q943117	A314115	CADMIUM	0		BDL	mg/L		
SPI01	Q943113	A314115	CADMIUM	0	0.050	0.0507	mg/L	101	
DUP02	Q935469	A313436	CADMIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	CADMIUM	0	5.00	3.94	mg/kg	79	
CDL01	Q943133	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q943134	PERKIN ELM	CADMIUM	1.00		0.915	mg/L	92	
CCV	Q943115	INORGANIC	CADMIUM	5.00		5.02	mg/L	100	
BLA01	Q943114	NA	CADMIUM			< 0.002	mg/L		
LCS	Q935470	INORGANIC	CADMIUM	.5		0.452	mg/L	90	
BLA02	Q935471	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q943107	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q943100	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q943148	PERKIN ELM	CADMIUM	0.010		0.0105	mg/L	105	
ICS-A	Q943147	PERKIN ELM	CADMIUM	1.00		0.843	mg/L	84	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942395	SPEX	CALCIUM	100		100.	mg/L	100	
SPI01	Q942375	A313865	CALCIUM	98.8	100	208.	mg/L	109	
DUP01	Q942376	A313865	CALCIUM	98.8		114.	mg/L		14
DUP02	Q935469	A313436	CALCIUM	8820		9120	mg/kg		3
SPI02	Q935467	A313436	CALCIUM	9090	10000	18200	mg/kg	91	
ICS-A	Q942390	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	Q942349	INORGANIC	CALCIUM	50.0		51.1	mg/L	102	
BLA01	Q942348	NA	CALCIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	CALCIUM	100		91.4	mg/L	91	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q935466	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	CALCIUM	50.0		50.8	mg/L	102	
BLA01	Q942341	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q942350	PERKIN ELM	CALCIUM	500		460.	mg/L	92	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M110.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	CHROMIUM	0.400		0.425	mg/L	106	
SPI01	Q942375	A313865	CHROMIUM	0	0.200	0.215	mg/L	108	
DUP01	Q942376	A313865	CHROMIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	CHROMIUM	19.4		18.4	mg/kg		5
SPI02	Q935467	A313436	CHROMIUM	19.8	20.0	39.2	mg/kg	97	
CDL01	Q942391	INORGANIC	CHROMIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	CHROMIUM	0.500		0.494	mg/L	99	
CCV	Q942349	INORGANIC	CHROMIUM	5.00		5.14	mg/L	103	
BLA01	Q942348	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	CHROMIUM	2.00		1.90	mg/L	95	
BLA02	Q935466	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	CHROMIUM	5.00		5.16	mg/L	103	
BLA01	Q942341	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	CHROMIUM	0.020		0.0206	mg/L	103	
ICS-A	Q942350	PERKIN ELM	CHROMIUM	0.500		0.472	mg/L	94	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COBALT	0.400		0.428	mg/L	107	
SPI01	Q942375	A313865	COBALT	0	0.500	0.524	mg/L	105	
DUP01	Q942376	A313865	COBALT	0		BDL	mg/L		
DUP02	Q935469	A313436	COBALT	6.96		7.04	mg/kg		1
SPI02	Q935467	A313436	COBALT	7.37	50.0	54.1	mg/kg	94	
CDL01	Q942391	INORGANIC	COBALT	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	COBALT	0.500		0.481	mg/L	96	
CCV	Q942349	INORGANIC	COBALT	5.00		5.15	mg/L	103	
BLA01	Q942348	NA	COBALT			< 0.004	mg/L		
LCS	Q935465	SPEX	COBALT	5.00		4.69	mg/L	94	
BLA02	Q935466	NA	COBALT			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	COBALT	5.00		5.18	mg/L	104	
BLA01	Q942341	NA	COBALT			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	COBALT	0.100		0.122	mg/L	122	
ICS-A	Q942350	PERKIN ELM	COBALT	0.500		0.467	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	COPPER	0.400		0.405	mg/L	101	
SPI01	Q942375	A313865	COPPER	0	0.250	0.260	mg/L	104	
DUP01	Q942376	A313865	COPPER	0		BDL	mg/L		
DUP02	Q935469	A313436	COPPER	18.5		17.4	mg/kg		6
SPI02	Q935467	A313436	COPPER	19.4	25.0	44.6	mg/kg	101	
CDL01	Q942391	INORGANIC	COPPER	10		10.4	mg/L	104	
ICS-A	Q942390	PERKIN ELM	COPPER	0.500		0.481	mg/L	96	
CCV	Q942349	INORGANIC	COPPER	5.00		5.30	mg/L	106	
BLA01	Q942348	NA	COPPER			< 0.008	mg/L		
LCS	Q935465	SPEX	COPPER	2.50		2.45	mg/L	98	
BLA02	Q935466	NA	COPPER			< 0.008	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	COPPER	5.00		5.31	mg/L	106	
BLA01	Q942341	NA	COPPER			< 0.008	mg/L		
CDL01	Q942340	PERKIN ELM	COPPER	0.050		0.0651	mg/L	130	
ICS-A	Q942350	PERKIN ELM	COPPER	0.500		0.487	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 14-JUN-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 15-JUN-94 File ID: Run: R220258

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q943139	PERKIN ELM	IRON	0.400		0.427	mg/L	107	
DUP01	Q943117	A314115	IRON	0		BDL	mg/L		
SPI01	Q943113	A314115	IRON	0	1.00	1.09	mg/L	109	
DUP02	Q935469	A313436	IRON	15900		14800	mg/kg		7
CDL01	Q943133	INORGANIC	IRON	10		10.1	mg/L	101	
ICS-A	Q943134	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q943115	INORGANIC	IRON	5.00		5.13	mg/L	103	
BLA01	Q943114	NA	IRON			< 0.01	mg/L		
LCS	Q935465	SPEX	IRON	10.0		9.26	mg/L	93	
BLA02	Q935466	NA	IRON			.106	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q943107	INORGANIC	IRON	5.00		5.14	mg/L	103	
BLA01	Q943100	NA	IRON			< 0.01	mg/L		
ICS-A	Q943147	PERKIN ELM	IRON	200		169.	mg/L	85	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942395	SPEX	MAGNESIUM	100		101.	mg/L	101	
SPI01	Q942375	A313865	MAGNESIUM	30.2	100	139.	mg/L	109	
DUP01	Q942376	A313865	MAGNESIUM	30.2		35.5	mg/L		16
DUP02	Q935469	A313436	MAGNESIUM	6320		6510	mg/kg		3
SPI02	Q935467	A313436	MAGNESIUM	6630	10000	16200	mg/kg	96	
ICS-A	Q942390	PERKIN ELM	MAGNESIUM	500		484.	mg/L	97	
CCV	Q942349	INORGANIC	MAGNESIUM	50.0		52.1	mg/L	104	
BLA01	Q942348	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	MAGNESIUM	100		93.0	mg/L	93	
BLA02	Q935466	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A313437		See Certificate of Analysis						

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942344	INORGANIC	MAGNESIUM	50.0		51.9	mg/L	104	
BLA01	Q942341	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q942350	PERKIN ELM	MAGNESIUM	500		479.	mg/L	96	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M119.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	MANGANESE	0.400		0.420	mg/L	105	
SPI01	Q942375	A313865	MANGANESE	0.0840	0.500	0.609	mg/L	105	
DUP01	Q942376	A313865	MANGANESE	0.0840		0.0758	mg/L		10
DUP02	Q935469	A313436	MANGANESE	418.		438.	mg/kg		5
CDL01	Q942391	INORGANIC	MANGANESE	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	MANGANESE	0.500		0.513	mg/L	103	
CCV	Q942349	INORGANIC	MANGANESE	5.00		5.18	mg/L	104	
BLA01	Q942348	NA	MANGANESE			< 0.004	mg/L		
LCS	Q935465	SPEX	MANGANESE	5.00		4.72	mg/L	94	
BLA02	Q935466	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	MANGANESE	5.00		5.19	mg/L	104	
BLA01	Q942341	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	MANGANESE	0.030		0.0328	mg/L	109	
ICS-A	Q942350	PERKIN ELM	MANGANESE	0.500		0.498	mg/L	100	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M122.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	NICKEL	0	0.500	0.513	mg/L	103	
DUP01	Q942376	A313865	NICKEL	0		BDL	mg/L		
DUP02	Q935469	A313436	NICKEL	19.6		17.6	mg/kg		11
SPI02	Q935467	A313436	NICKEL	19.1	50.0	64.9	mg/kg	92	
CDL01	Q942391	INORGANIC	NICKEL	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	NICKEL	1.00		0.926	mg/L	93	
CCV	Q942349	INORGANIC	NICKEL	5.00		5.08	mg/L	102	
BLA01	Q942348	NA	NICKEL			< 0.004	mg/L		
LCS	Q935465	SPEX	NICKEL	5.00		4.62	mg/L	92	
BLA02	Q935466	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	NICKEL	5.00		5.10	mg/L	102	
BLA01	Q942341	NA	NICKEL			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	NICKEL	0.080		0.103	mg/L	129	
ICS-A	Q942350	PERKIN ELM	NICKEL	1.00		0.897	mg/L	90	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M126.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	POTASSIUM	20.0		20.7	mg/L	104	
ICV01	Q942395	SPEX	POTASSIUM	100		105.	mg/L	105	
SPI01	Q942375	A313865	POTASSIUM	2.14	100	112.	mg/L	110	
DUP02	Q935469	A313436	POTASSIUM	1920		1980	mg/kg		3
SPI02	Q935467	A313436	POTASSIUM	2040	10000	12100	mg/kg	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q942349	INORGANIC	POTASSIUM	50.0		53.3	mg/L	107	
BLA01	Q942348	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	POTASSIUM	100		97.3	mg/L	97	
BLA02	Q935466	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	POTASSIUM	50.0		53.1	mg/L	106	
BLA01	Q942341	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SILVER	2.00		2.13	mg/L	107	
DUP01	Q942376	A313865	SILVER	0		BDL	mg/L		
DUP02	Q935469	A313436	SILVER	0		BDL	mg/kg		
SPI02	Q935467	A313436	SILVER	0	5.00	5.49	mg/kg	110	
CDL01	Q942391	INORGANIC	SILVER	2		2.05	mg/L	103	
ICS-A	Q942390	PERKIN ELM	SILVER	1.00		1.02	mg/L	102	
CCV	Q942349	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942348	NA	SILVER			< 0.004	mg/L		
LCS	Q935465	SPEX	SILVER	0.500		0.457	mg/L	91	
BLA02	Q935466	NA	SILVER			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	SILVER	1.00		1.06	mg/L	106	
BLA01	Q942341	NA	SILVER			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	SILVER	0.020		0.0275	mg/L	138	
ICS-A	Q942350	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942396	PERKIN ELM	SODIUM	2		2.03	mg/L	102	
ICV01	Q942395	SPEX	SODIUM	100		104.	mg/L	104	
SPI01	Q942375	A313865	SODIUM	16.1	100	120.	mg/L	104	
DUP01	Q942376	A313865	SODIUM	9.66		9.53	mg/L		1
DUP02	Q935469	A313436	SODIUM	140.		132.	mg/kg		6
SPI02	Q935467	A313436	SODIUM	154.	10000	10200	mg/kg	101	
CCV	Q942349	INORGANIC	SODIUM	50.0		52.9	mg/L	106	
BLA01	Q942348	NA	SODIUM			< 0.08	mg/L		
LCS	Q935465	SPEX	SODIUM	100		98.2	mg/L	98	
BLA02	Q935466	NA	SODIUM			.279	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	SODIUM	50.0		52.8	mg/L	106	
BLA01	Q942341	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	VANADIUM	0.400		0.415	mg/L	104	
SPI01	Q942375	A313865	VANADIUM	0	0.500	0.537	mg/L	107	
DUP01	Q942376	A313865	VANADIUM	0		BDL	mg/L		
DUP02	Q935469	A313436	VANADIUM	19.0		18.2	mg/kg		4

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q935467	A313436	VANADIUM	19.8	50.0	68.6	mg/kg	98	
CDL01	Q942391	INORGANIC	VANADIUM	10		10.3	mg/L	103	
ICS-A	Q942390	PERKIN ELM	VANADIUM	0.500		0.488	mg/L	98	
CCV	Q942349	INORGANIC	VANADIUM	5.00		5.19	mg/L	104	
BLA01	Q942348	NA	VANADIUM			< 0.004	mg/L		
LCS	Q935465	SPEX	VANADIUM	5.00		4.77	mg/L	95	
BLA02	Q935466	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	VANADIUM	5.00		5.23	mg/L	105	
BLA01	Q942341	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q942340	PERKIN ELM	VANADIUM	0.100		0.113	mg/L	113	
ICS-A	Q942350	PERKIN ELM	VANADIUM	0.500		0.475	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 13-JUN-94 Instrument: ICP Test: M139.3.0

Reviewer: S. ENDERSEN Review Date: 14-JUN-94 File ID: Run: R220117

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q942397	PERKIN ELM	ZINC	0.400		0.413	mg/L	103	
SPI01	Q942375	A313865	ZINC	0	0.500	0.521	mg/L	104	
DUP01	Q942376	A313865	ZINC	0		BDL	mg/L		
DUP02	Q935469	A313436	ZINC	119.		110.	mg/kg		8
SPI02	Q935467	A313436	ZINC	121.	50.0	165.	mg/kg	88	
CDL01	Q942391	INORGANIC	ZINC	10		9.86	mg/L	99	
ICS-A	Q942390	PERKIN ELM	ZINC	1.00		0.984	mg/L	98	
CCV	Q942349	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q942348	NA	ZINC			< 0.008	mg/L		
LCS	Q935465	SPEX	ZINC	5.00		4.45	mg/L	89	
BLA02	Q935466	NA	ZINC			.0321	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q942344	INORGANIC	ZINC	5.00		5.04	mg/L	101	
BLA01	Q942341	NA	ZINC			< 0.008	mg/L		
CDL01	Q942340	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	Q942350	PERKIN ELM	ZINC	1.00		0.964	mg/L	96	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M103.0.0

Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	ARSENIC	.04		0.0392	mg/L	98	
DUP02	Q935469	A313436	ARSENIC	0		BDL	mg/kg		
SPI02	Q935467	A313436	ARSENIC	0	200	186.	mg/kg	93	
CDL01	Q947356	INORGANIC	ARSENIC	.5		0.495	mg/L	99	
CCV	Q947355	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947354	NA	ARSENIC			< 0.002	mg/L		
LCS	Q935470	INORGANIC	ARSENIC	.5		.433	mg/L	86.6	
BLA02	Q935471	NA	ARSENIC			< .005	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q947351	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q947350	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	ARSENIC	.02		0.0227	mg/L	114	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M128.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	SELENIUM	.04		0.0405	mg/L	101	
DUP02	Q935474	A313436	SELENIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	SELENIUM	21.7	200	208.	mg/kg	93	
CDL01	Q947356	INORGANIC	SELENIUM	.5		0.497	mg/L	99	
CCV	Q947355	INORGANIC	SELENIUM	.1		0.102	mg/L	102	
BLA01	Q947354	NA	SELENIUM			< 0.002	mg/L		
LCS	Q935470	INORGANIC	SELENIUM	.5		.423	mg/L	84.6	
BLA02	Q935471	NA	SELENIUM			< .01	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q947351	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q947350	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	SELENIUM	.01		0.0116	mg/L	116	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M134.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	THALLIUM	.04		0.0434	mg/L	109	
DUP02	Q935469	A313436	THALLIUM	0		BDL	mg/kg		
SPI02	Q935467	A313436	THALLIUM	0	300	252.	mg/kg	84	
CDL01	Q947356	INORGANIC	THALLIUM	.5		0.506	mg/L	101	
CCV	Q947355	INORGANIC	THALLIUM	.1		0.104	mg/L	104	
BLA01	Q947354	NA	THALLIUM			< 0.004	mg/L		
LCS	Q935470	INORGANIC	THALLIUM	.5		0.457	mg/L	91	
BLA02	Q935471	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q947351	INORGANIC	THALLIUM	.1		0.105	mg/L	105	
BLA01	Q947350	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q947349	PERKIN-ELM	THALLIUM	.02		.0269	mg/L	135	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 21-JUN-94 Instrument: ICP Test: M116.0.0
Reviewer: S. ENDERSEN Review Date: 22-JUN-94 File ID: Run: R220907

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q947366	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q935469	A313436	LEAD	29.8		28.3	mg/kg		5
SPI02	Q935467	A313436	LEAD	30.4	50.0	76.2	mg/kg	92	
ICS-A	Q947369	PERKIN ELM	LEAD	1		0.957	mg/L	96	
CDL01	Q947356	INORGANIC	LEAD	.5		0.497	mg/L	99	
CCV	Q947355	INORGANIC	LEAD	.1		0.101	mg/L	101	
BLA01	Q947354	NA	LEAD			< 0.002	mg/L		
LCS	Q935470	INORGANIC	LEAD	.5		0.460	mg/L	92	
BLA02	Q935471	NA	LEAD			< 0.002	mg/L		
SAMPLE	A313437		See Certificate of Analysis						
CCV	Q947351	INORGANIC	LEAD	.1		0.100	mg/L	100	
BLA01	Q947350	NA	LEAD			< 0.002	mg/L		
CDL01	Q947349	PERKIN-ELM	LEAD	.006		0.00570	mg/L	95	
ICS-A	Q947348	PERKIN ELM	LEAD	1		0.937	mg/L	94	

MERCURY CVAA SW846-7471(MOD)

Analyst : J. KRAMER Analysis Date: 16-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: S. O'NEAL Review Date: 17-JUN-94 File ID: 000705 Run: R220579

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q945202		MERCURY	.00147		.00134	mg/L	91.2
DUP02	Q936193	A313435	MERCURY	0		BDL	mg/L	
SPI02	Q936191	A313435	MERCURY	0	.25	.262	mg/L	104.8
CDL01	Q945205		MERCURY	.0002		.00017	mg/L	85
CCV	Q945263		MERCURY	.003		.00298	mg/L	99.3
BLA01	Q945264		MERCURY			< .0002	mg/L	
LCS	Q936189		MERCURY	.003		.00298	mg/L	99.3
BLA02	Q936190		MERCURY			< .0002	mg/L	
SAMPLE	A313437		See Certificate of Analysis					
CCV	Q945265		MERCURY	.003		.00307	mg/L	102.3
BLA01	Q945266		MERCURY			< .0002	mg/L	
CDL01	Q945271		MERCURY	.0002		.0000823	mg/L	41.2

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : H. WILLIAMS Analysis Date: 10-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >5841C Run: R220050

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q941759	A313431	1,1-DICHLOROETHENE	0	50	45.5	ug/kg	91	
SPI01	Q941759	A313431	TRICHLOROETHENE	0	50	46.2	ug/kg	92.4	
SPI01	Q941759	A313431	BENZENE	0	50	49.5	ug/kg	99	
SPI01	Q941759	A313431	TOLUENE	13	50	53.4	ug/kg	80.8	
SPI01	Q941759	A313431	CHLOROBENZENE	0	50	50.4	ug/kg	100.8	
DPS01	Q941760	A313431	1,1-DICHLOROETHENE	0	50	47.8	ug/kg	95.6	4.9
DPS01	Q941760	A313431	TRICHLOROETHENE	0	50	51.8	ug/kg	103.6	4
DPS01	Q941760	A313431	BENZENE	0	50	50.6	ug/kg	101.2	
DPS01	Q941760	A313431	TOLUENE	13	50	59.9	ug/kg	93.8	14.9
DPS01	Q941760	A313431	CHLOROBENZENE	0	50	51	ug/kg	102	1.2
CCV	Q941757		See Attached Report g5830c.ind						
BLA01	Q941758		See Attached Report g5831c.ind						
SAMPLE	A313437		See Certificate of Analysis						

Comments

Q941759 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q941760 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 11-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 13-JUN-94 File ID: >00078 Run: R219890

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940554	A313437	PHENOL	0	3300	2290	ug/kg	69.4	
SPI02	Q940554	A313437	2-CHLOROPHENOL	0	3300	2360	ug/kg	71.5	
SPI02	Q940554	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2170	ug/kg	65.8	
SPI02	Q940554	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q940554	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2280	ug/kg	69.1	
SPI02	Q940554	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2520	ug/kg	76.4	
SPI02	Q940554	A313437	ACENAPHTHENE	0	3300	2320	ug/kg	70.3	
SPI02	Q940554	A313437	4-NITROPHENOL	0	3300	2710	ug/kg	82.1	
SPI02	Q940554	A313437	2,4-DINITROTOLUENE	0	3300	2480	ug/kg	75.2	
SPI02	Q940554	A313437	PENTACHLOROPHENOL	0	3300	1150	ug/kg	34.8	
SPI02	Q940554	A313437	PYRENE	0	3300	1740	ug/kg	52.7	
DPS02	Q940555	A313437	PHENOL	0	3300	2230	ug/kg	67.6	2.6
DPS02	Q940555	A313437	2-CHLOROPHENOL	0	3300	2340	ug/kg	70.9	.8
DPS02	Q940555	A313437	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	2.3

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q940555	A313437	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2210	ug/kg	67	.9
DPS02	Q940555	A313437	1,2,4-TRICHLOROBENZENE	0	3300	2310	ug/kg	70	1.3
DPS02	Q940555	A313437	4-CHLORO-3-METHYLPHENOL	0	3300	2360	ug/kg	71.5	6.6
DPS02	Q940555	A313437	ACENAPHTHENE	0	3300	2310	ug/kg	70	.4
DPS02	Q940555	A313437	4-NITROPHENOL	0	3300	2570	ug/kg	77.9	5.2
DPS02	Q940555	A313437	2,4-DINITROTOLUENE	0	3300	2380	ug/kg	72.1	4.2
DPS02	Q940555	A313437	PENTACHLOROPHENOL	0	3300	1210	ug/kg	36.7	5.3
DPS02	Q940555	A313437	PYRENE	0	3300	1830	ug/kg	55.5	5.2
CCV	Q940531		See Attached Report g0002b.ind						
SAMPLE	A313437		See Certificate of Analysis						

Comments

Q940554 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q940555 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 22-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 27-JUN-94 File ID: 5120 Run: R221812
Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q940538	A313424	GAMMA-BHC (LINDANE)	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	HEPTACHLOR	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	ALDRIN	0	.017	.017	mg/kg	100	
SPI02	Q940538	A313424	DIELDRIN	0	.033	.035	mg/kg	106.1	
SPI02	Q940538	A313424	ENDRIN	0	.033	.043	mg/kg	130.3	
SPI02	Q940538	A313424	4,4'-DDT	0	.033	.039	mg/kg	118.2	
DPS02	Q940539	A313424	GAMMA-BHC (LINDANE)	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	HEPTACHLOR	0	.017	.018	mg/kg	105.9	5.7
DPS02	Q940539	A313424	ALDRIN	0	.017	.016	mg/kg	94.1	6.1
DPS02	Q940539	A313424	DIELDRIN	0	.033	.033	mg/kg	100	5.9
DPS02	Q940539	A313424	ENDRIN	0	.033	.038	mg/kg	115.2	12.[illegible]
DPS02	Q940539	A313424	4,4'-DDT	0	.033	.031	mg/kg	93.9	22.[illegible]
BLA02	Q940527		ALPHA-BHC			< .0032	mg/L		
BLA02	Q940527		BETA-BHC			< .0032	mg/L		
BLA02	Q940527		DELTA-BHC			< .0032	mg/L		
BLA02	Q940527		GAMMA-BHC (LINDANE)			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR			< .0032	mg/L		
BLA02	Q940527		ALDRIN			< .0032	mg/L		
BLA02	Q940527		HEPTACHLOR EPOXIDE			< .0032	mg/L		
BLA02	Q940527		ENDOSULFAN I			< .0032	mg/L		
BLA02	Q940527		DIELDRIN			< .0064	mg/L		
BLA02	Q940527		4,4'-DDE			< .0064	mg/L		
BLA02	Q940527		ENDRIN			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN II			< .0064	mg/L		
BLA02	Q940527		4,4'-DDD			< .0064	mg/L		
BLA02	Q940527		ENDOSULFAN SULFATE			< .0064	mg/L		
BLA02	Q940527		4,4'-DDT			< .0064	mg/L		
BLA02	Q940527		METHOXYCHLOR			< .032	mg/L		
BLA02	Q940527		ENDRIN KETONE			< .0064	mg/L		
BLA02	Q940527		ALPHA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		GAMMA-CHLORDANE			< .032	mg/L		
BLA02	Q940527		TOXAPHENE			< .064	mg/L		
BLA02	Q940527		PCB AROCHLOR 1016			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1221			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1232			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1242			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1248			< .032	mg/L		
BLA02	Q940527		PCB AROCHLOR 1254			< .064	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A31343

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLAC2	Q940527		PCB AROCHLOR 1260			< .064	mg/L		
LCS	Q940537		GAMMA-BHC (LINDANE)	.017		.019	mg/kg	111.8	
LCS	Q940537		HEPTACHLOR	.017		.019	mg/kg	111.8	
LCS	Q940537		ALDRIN	.017		.017	mg/kg	100	
LCS	Q940537		DIELDRIN	.033		.041	mg/kg	124.2	
LCS	Q940537		ENDRIN	.033		.043	mg/kg	130.3	
LCS	Q940537		4,4'-DDT	.033		.043	mg/kg	130.3	
SAMPLE	A313437		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: D. Hemmerlein

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QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314365
	Complete	PO Number
	14-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 13:30

Sample Description

SAMPLE ID: D-061594-WP-097
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 21-JUN-94 — Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 22-JUN-94 — File ID: 2019-2020 — Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	Q948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
DPS01	Q948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
SPI01	Q948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DUP01	Q948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	Q948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	Q948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	Q948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	Q948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : A. WOOD — Analysis Date: 17-JUN-94 — Test: G401.7.0
Reviewer: C. BOYLE — Review Date: 17-JUN-94 — File ID: 3953-3955 — Run: R220552

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q945101	H121432	SOLIDS	13		13	Percent		0
LCS01	Q945100		SOLIDS	11.2877		11.2871	Grams	100	
SAMPLE	A314365		See Certificate of Analysis						
LCS01	Q945102		SOLIDS	12.2406		12.2402	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q954598		CYANIDE	.234		.213	mg/L	91	
ICV01	Q954624		CYANIDE	.247		.252	mg/L	102	
ICV01	Q954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	Q954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	Q954597		CYANIDE	.01		.01	mg/L	100	
CCV	Q954606		CYANIDE	.1		.101	mg/L	101	
BLA01	Q954607		CYANIDE			-.001	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q954609		CYANIDE	.1		.099	mg/L	99	
BLA01	Q954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	Q940872	A314366	ALUMINUM	7680		8000	mg/kg		4
CDL01	Q956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	Q956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	Q956533	INORGANIC	ALUMINUM	5.00		5.21	mg/L	104	
BLA01	Q956532	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q940868	SPEX	ALUMINUM	20.0		18.6	mg/L	93	
BLA02	Q940869	NA	ALUMINUM			.145	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	ALUMINUM	5.00		5.14	mg/L	103	
BLA01	Q956530	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q957391	PERKIN ELM	ANTIMONY	0.400		0.413	mg/L	103	
DUP02	Q940872	A314366	ANTIMONY	0		BDL	mg/kg		
CDL01	Q957383	PERKIN ELM	ANTIMONY	0.120		0.134	mg/L	112	
CCV	Q957399	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	Q957401	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q940868	SPEX	ANTIMONY	5.00		4.06	mg/L	81	
BLA02	Q940869	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q957404	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q957410	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q957451	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	Q940872	A314366	BARIUM	30.3		28.4	mg/kg		7
SPI02	Q940870	A314366	BARIUM	30.3	200	213	mg/kg	91	
CDL01	Q956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	Q956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	Q956533	INORGANIC	BARIUM	5.00		4.95	mg/L	99	
BLA01	Q956532	NA	BARIUM			< 0.004	mg/L		
LCS	Q940868	SPEX	BARIUM	20.0		18.5	mg/L	93	
BLA02	Q940869	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	BARIUM	5.00		4.94	mg/L	99	
BLA01	Q956530	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	Q940872	A314366	BERYLLIUM	0		BDL	mg/kg		
SPI02	Q940870	A314366	BERYLLIUM	0	5.00	4.94	mg/kg	99	
CDL01	Q956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	Q956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	Q956533	INORGANIC	BERYLLIUM	5.00		4.87	mg/L	97	
BLA01	Q956532	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q940868	SPEX	BERYLLIUM	0.500		0.449	mg/L	90	
BLA02	Q940869	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	BERYLLIUM	5.00		4.86	mg/L	97	
BLA01	Q956530	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	Q956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q957391	PERKIN ELM	CADMIUM	0.400		0.406	mg/L	102	
DUP02	Q940872	A314366	CADMIUM	0		BDL	mg/kg		
CDL01	Q957379	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q957378	PERKIN ELM	CADMIUM	1.00		0.892	mg/L	89	
CCV	Q957399	INORGANIC	CADMIUM	5.00		4.90	mg/L	98	
BLA01	Q957401	NA	CADMIUM			< 0.002	mg/L		
BLA02	Q940869	NA	CADMIUM			< 0.002	mg/L		
LCS	Q940873	INORGANIC	CADMIUM	.5		0.417	mg/L	83	
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q957404	INORGANIC	CADMIUM	5.00		4.88	mg/L	98	
BLA01	Q957410	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q957451	PERKIN ELM	CADMIUM	0.010		0.0104	mg/L	104	
ICS-A	Q957448	PERKIN ELM	CADMIUM	1.00		0.883	mg/L	88	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q957387	SPEX	CALCIUM	100		99.0	mg/L	99	
DUP02	Q940872	A314366	CALCIUM	39200		32500	mg/kg		19
ICS-A	Q957378	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	Q957399	INORGANIC	CALCIUM	50.0		50.4	mg/L	101	
BLA01	Q957401	NA	CALCIUM			< 0.08	mg/L		
LCS	Q940868	SPEX	CALCIUM	100		88.8	mg/L	89	
BLA02	Q940869	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q957404	INORGANIC	CALCIUM	50.0		50.2	mg/L	100	
BLA01	Q957410	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q957448	PERKIN ELM	CALCIUM	500		468.	mg/L	94	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0961579	PERKIN ELM	CHROMIUM	0.400		0.410	mg/L	103	
DUP02	0953020	A314366	CHROMIUM	10.6		10.1	mg/kg		5
SPI02	0953018	A314366	CHROMIUM	10.6	20.0	29.1	mg/kg	93	
CDL01	0961699	PERKIN ELM	CHROMIUM	0.020		0.0220	mg/L	110	
ICS-A	0961700	PERKIN ELM	CHROMIUM	0.500		0.484	mg/L	97	
CCV	0961713	INORGANIC	CHROMIUM	5.00		4.97	mg/L	99	
BLA01	0961714	NA	CHROMIUM			< 0.004	mg/L		
LCS	0953016	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	0953017	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0961715	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0961716	NA	CHROMIUM			< 0.004	mg/L		

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	COBALT	7.50		7.18	mg/kg		4
SPI02	0940870	A314366	COBALT	7.50	50.0	51.0	mg/kg	87	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956533	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	0956532	NA	COBALT			.0115	mg/L		
LCS	0940868	SPEX	COBALT	5.00		4.48	mg/L	90	
BLA02	0940869	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0956531	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	0956530	NA	COBALT			.0106	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	COPPER	12.2		12.7	mg/kg		4
SPI02	0940870	A314366	COPPER	12.2	25.0	34.9	mg/kg	91	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956533	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	0956532	NA	COPPER			< 0.008	mg/L		
LCS	0940868	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	0940869	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0956531	INORGANIC	COPPER	5.00		4.97	mg/L	99	
BLA01	0956530	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0940872	A314366	IRON	16500		16500	mg/kg		0
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957399	INORGANIC	IRON	5.00		4.81	mg/L	96	
BLA01	0957401	NA	IRON			< 0.01	mg/L		
LCS	0940868	SPEX	IRON	10.0		8.81	mg/L	88	
BLA02	0940869	NA	IRON			.217	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0957404	INORGANIC	IRON	5.00		4.79	mg/L	96	
BLA01	0957410	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0940872	A314366	MAGNESIUM	12200		12800	mg/kg		5
SPI02	0940870	A314366	MAGNESIUM	12200	10000	21500	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956533	INORGANIC	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	0956532	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0940868	SPEX	MAGNESIUM	100		87.8	mg/L	88	
BLA02	0940869	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0956531	INORGANIC	MAGNESIUM	50.0		49.1	mg/L	98	
BLA01	0956530	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	MANGANESE	0.400		0.401	mg/L	100	
DUP02	0952898	A314366	MANGANESE	219		170	mg/kg		25
CDL01	0958212	INORGANIC	MANGANESE	10		10.1	mg/L	101	
ICS-A	0958210	PERKIN ELM	MANGANESE	0.500		0.490	mg/L	98	
CCV	0958153	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0958152	NA	MANGANESE			< 0.004	mg/L		
LCS	0952894	SPEX	MANGANESE	5.00		4.19	mg/L	84	
BLA02	0952895	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	0958220	INORGANIC	MANGANESE	5.00		4.88	mg/L	98	
BLA01	0958221	NA	MANGANESE			< 0.004	mg/L		
CDL01	0958255	PERKIN ELM	MANGANESE	0.030		0.0327	mg/L	109	
ICS-A	0958256	PERKIN ELM	MANGANESE	0.500		0.471	mg/L	94	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q961579	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
DUP02	Q953020	A314366	NICKEL	12.0		11.5	mg/kg		4
SPI02	Q953018	A314366	NICKEL	12.0	50.0	55.6	mg/kg	87	
CDL01	Q961699	PERKIN ELM	NICKEL	0.080		0.0916	mg/L	115	
ICS-A	Q961700	PERKIN ELM	NICKEL	1.00		0.923	mg/L	92	
CCV	Q961713	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q961714	NA	NICKEL			< 0.004	mg/L		
LCS	Q953016	SPEX	NICKEL	5.00		4.29	mg/L	86	
BLA02	Q953017	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q961715	INORGANIC	NICKEL	5.00		4.96	mg/L	99	
BLA01	Q961716	NA	NICKEL			< 0.004	mg/L		

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	Q956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	Q940872	A314366	POTASSIUM	1510		1560	mg/kg		3
SPI02	Q940870	A314366	POTASSIUM	1510	10000	11100	mg/kg	96	
CCV	Q956533	INORGANIC	POTASSIUM	50.0		51.5	mg/L	103	
BLA01	Q956532	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q940868	SPEX	POTASSIUM	100		92.9	mg/L	93	
BLA02	Q940869	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	POTASSIUM	50.0		51.0	mg/L	102	
BLA01	Q956530	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	Q940872	A314366	SILVER	0		1.35	mg/kg		30
SPI02	Q940870	A314366	SILVER	0	5.00	6.09	mg/kg	122	
CDL01	Q956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	Q956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	Q956533	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	Q956532	NA	SILVER			< 0.004	mg/L		
LCS	Q940868	SPEX	SILVER	0.500		0.443	mg/L	89	
BLA02	Q940869	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	Q956530	NA	SILVER			.0106	mg/L		
CDL01	Q956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	Q956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	Q960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	Q940872	A314366	SODIUM	84.2		86.8	mg/kg		3
SPI02	Q940870	A314366	SODIUM	84.2	10000	9420	mg/kg	93	
CCV	Q960814	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q960815	NA	SODIUM			< 0.08	mg/L		
LCS	Q940868	SPEX	SODIUM	100		90.0	mg/L	90	
BLA02	Q940869	NA	SODIUM			.346	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q960825	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q960826	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	Q940872	A314366	VANADIUM	15.9		17.1	mg/kg		7
SPI02	Q940870	A314366	VANADIUM	15.9	50.0	61.1	mg/kg	90	
CDL01	Q956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	Q956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	Q956533	INORGANIC	VANADIUM	5.00		4.96	mg/L	99	
BLA01	Q956532	NA	VANADIUM			< 0.004	mg/L		
LCS	Q940868	SPEX	VANADIUM	5.00		4.56	mg/L	91	
BLA02	Q940869	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q956531	INORGANIC	VANADIUM	5.00		4.95	mg/L	99	
BLA01	Q956530	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	Q956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q961579	PERKIN ELM	ZINC	0.400		0.420	mg/L	105	
DUP02	Q953020	A314366	ZINC	61.9		69.7	mg/kg		12
SPI02	Q953018	A314366	ZINC	61.9	50.0	118.	mg/kg	112	
CDL01	Q961699	PERKIN ELM	ZINC	0.040		0.0506	mg/L	127	
ICS-A	Q961700	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	Q961713	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q961714	NA	ZINC			< 0.008	mg/L		
LCS	Q953016	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q953017	NA	ZINC			.0316	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q961715	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q961716	NA	ZINC			< 0.008	mg/L		

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 08-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 11-JUL-94 File ID: Run: R222948

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q961343	PERKIN-ELM	ARSENIC	.04		0.0385	mg/L	96
DUP02	Q953020	A314366	ARSENIC	0		BDL	mg/kg	
SPI02	Q953018	A314366	ARSENIC	0	200	190.	mg/kg	95
CDL01	Q961345	INORGANIC	ARSENIC	.5		0.498	mg/L	100
CCV	Q961351	INORGANIC	ARSENIC	.1		0.0998	mg/L	100
BLA01	Q961352	NA	ARSENIC			< 0.002	mg/L	
LCS	Q953021	INORGANIC	ARSENIC	.5		0.450	mg/L	90
BLA02	Q953022	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A314365		See Certificate of Analysis					
CCV	Q961353	INORGANIC	ARSENIC	.1		0.100	mg/L	100
BLA01	Q961354	NA	ARSENIC			< 0.002	mg/L	
CDL01	Q961355	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	Q940872	A314366	SELENIUM	108.		110.	mg/kg		2
SPI02	Q940870	A314366	SELENIUM	108.	200	278.	mg/kg	85	
CDL01	Q958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	Q958980	INORGANIC	SELENIUM	.1		0.0914	mg/L	91	
BLA01	Q958979	NA	SELENIUM			< 0.002	mg/L		
LCS	Q940873	INORGANIC	SELENIUM	.5		0.408	mg/L	82	
BLA02	Q940874	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	Q958977	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	Q940872	A314366	THALLIUM	0		BDL	mg/kg		
SPI02	Q940870	A314366	THALLIUM	0	300	280.	mg/kg	93	
CDL01	Q958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	Q958980	INORGANIC	THALLIUM	.1		0.0943	mg/L	94	
BLA01	Q958979	NA	THALLIUM			< 0.004	mg/L		
LCS	Q940873	INORGANIC	THALLIUM	.5		0.422	mg/L	84	
BLA02	Q940874	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	Q958977	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	Q940872	A314366	LEAD	13.1		14.4	mg/kg		10
SPI02	Q940870	A314366	LEAD	13.1	50	55.2	mg/kg	84	
CDL01	Q958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	Q958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	Q958980	INORGANIC	LEAD	.1		0.0922	mg/L	92	
BLA01	Q958979	NA	LEAD			< 0.002	mg/L		
LCS	Q940873	INORGANIC	LEAD	.5		0.437	mg/L	87	
BLA02	Q940874	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314365		See Certificate of Analysis						
CCV	Q958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	Q958977	NA	LEAD			< 0.002	mg/L		
CDL01	Q958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	Q958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 23-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 23-JUN-94 File ID: 000735 Run: R221078

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q948554		MERCURY	.00147		.00131	mg/L	89.1	
CDL01	Q948558		MERCURY	.0002		.00021	mg/L	105	
CCV	Q948559		MERCURY	.003		.00273	mg/L	91	
BLA01	Q948560		MERCURY			< .0002	mg/L		
SAMPLE	A314365		See Certificate of Analysis						

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 27-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 01-JUL-94 File ID: >6128C Run: R222291

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q956809	A314166	1,1-DICHLOROETHENE	0	50	51.7	ug/L	103.4	
SPI01	Q956809	A314166	TRICHLOROETHENE	0	50	48.3	ug/L	96.6	
SPI01	Q956809	A314166	BENZENE	0	50	53.5	ug/L	107	
SPI01	Q956809	A314166	TOLUENE	0	50	62.7	ug/L	125.4	
SPI01	Q956809	A314166	CHLOROBENZENE	0	50	49.2	ug/L	98.4	
DPS01	Q956810	A314166	1,1-DICHLOROETHENE	0	50	50.5	ug/L	101	2.3
DPS01	Q956810	A314166	TRICHLOROETHENE	0	50	47.6	ug/L	95.2	1.5
DPS01	Q956810	A314166	BENZENE	0	50	55	ug/L	110	2.8
DPS01	Q956810	A314166	TOLUENE	0	50	70.7	ug/L	141.4	12
DPS01	Q956810	A314166	CHLOROBENZENE	0	50	47.4	ug/L	94.8	3.7
CCV	Q956807		See Attached Report g6120c.ind						
BLA01	Q956808		See Attached Report g6121c.ind						
SAMPLE	A314365		See Certificate of Analysis						

Comments

Q956809 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q956810 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 30-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 07-JUL-94 File ID: >7801N Run: R222528

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
SPI02	0948745	A314368	PHENOL	0	3300	2310	ug/kg	70	
SPI02	0948745	A314368	2-CHLOROPHENOL	0	3300	2400	ug/kg	72.7	
SPI02	0948745	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2240	ug/kg	67.9	
SPI02	0948745	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2500	ug/kg	75.8	
SPI02	0948745	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2380	ug/kg	72.1	
SPI02	0948745	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2270	ug/kg	68.8	
SPI02	0948745	A314368	ACENAPHTHENE	0	3300	2380	ug/kg	72.1	
SPI02	0948745	A314368	4-NITROPHENOL	0	3300	1910	ug/kg	57.9	
SPI02	0948745	A314368	2,4-DINITROTOLUENE	0	3300	2190	ug/kg	66.4	
SPI02	0948745	A314368	PENTACHLOROPHENOL	0	3300	679	ug/kg	20.6	
SPI02	0948745	A314368	PYRENE	0	3300	2890	ug/kg	87.6	
DPS02	0948746	A314368	PHENOL	0	3300	2340	ug/kg	70.9	1.3
DPS02	0948746	A314368	2-CHLOROPHENOL	0	3300	2420	ug/kg	73.3	.8
DPS02	0948746	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	.9
DPS02	0948746	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2370	ug/kg	71.8	5.4
DPS02	0948746	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2340	ug/kg	70.9	1.7
DPS02	0948746	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2250	ug/kg	68.2	.9
DPS02	0948746	A314368	ACENAPHTHENE	0	3300	2400	ug/kg	72.7	.8
DPS02	0948746	A314368	4-NITROPHENOL	0	3300	1720	ug/kg	52.1	10.5
DPS02	0948746	A314368	2,4-DINITROTOLUENE	0	3300	2170	ug/kg	65.8	.9
DPS02	0948746	A314368	PENTACHLOROPHENOL	0	3300	742	ug/kg	22.5	8.8
DPS02	0948746	A314368	PYRENE	0	3300	2860	ug/kg	86.7	1
CCV	0958401		See Attached Report g7795h.ind						
BLA01	0958402		See Attached Report g7796h.ind						
BLA02	0962587		See Attached Report g7071f.ind						
SAMPLE	A314365		See Certificate of Analysis						

Comments

Q948745 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q948746 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 28-JUN-94 File ID: 5158 Run: R221764

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0950393	A314368	GAMMA-BHC (LINDANE)	0	.017	.0099	mg/kg	58.2	
SPI02	0950393	A314368	HEPTACHLOR	0	.017	.012	mg/kg	70.6	
SPI02	0950393	A314368	ALDRIN	0	.017	.011	mg/kg	64.7	
SPI02	0950393	A314368	DIELDRIN	0	.033	.024	mg/kg	72.7	
SPI02	0950393	A314368	ENDRIN	0	.033	.024	mg/kg	72.7	
SPI02	0950393	A314368	4,4'-DDT	0	.033	.026	mg/kg	78.8	
DPS02	0950394	A314368	GAMMA-BHC (LINDANE)	0	.017	.01	mg/kg	58.8	1
DPS02	0950394	A314368	HEPTACHLOR	0	.017	.013	mg/kg	76.5	8
DPS02	0950394	A314368	ALDRIN	0	.017	.012	mg/kg	70.6	8.7
DPS02	0950394	A314368	DIELDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	0950394	A314368	ENDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	0950394	A314368	4,4'-DDT	0	.033	.027	mg/kg	81.8	3.7
BLA02	0962587		See Attached Report g7071f.ind						
SAMPLE	A314365		See Certificate of Analysis						
BLA02	0950391		ALPHA-BHC			< .0032	mg/kg		
BLA02	0950391		BETA-BHC			< .0032	mg/kg		
BLA02	0950391		DELTA-BHC			< .0032	mg/kg		
BLA02	0950391		GAMMA-BHC (LINDANE)			< .0032	mg/kg		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314365

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q950391		HEPTACHLOR			< .0032	mg/kg		
BLA02	Q950391		ALDRIN			< .0032	mg/kg		
BLA02	Q950391		HEPTACHLOR EPOXIDE			< .0032	mg/kg		
BLA02	Q950391		ENDOSULFAN I			< .0032	mg/kg		
BLA02	Q950391		DIELDRIN			< .0064	mg/kg		
BLA02	Q950391		4,4'-DDE			< .0064	mg/kg		
BLA02	Q950391		ENDRIN			< .0064	mg/kg		
BLA02	Q950391		ENDOSULFAN II			< .0064	mg/kg		
BLA02	Q950391		4,4'-DDD			< .0064	mg/kg		
BLA02	Q950391		ENDOSULFAN SULFATE			< .0064	mg/kg		
BLA02	Q950391		4,4'-DDT			< .0064	mg/kg		
BLA02	Q950391		METHOXYCHLOR			< .032	mg/kg		
BLA02	Q950391		ENDRIN KETONE			< .0064	mg/kg		
BLA02	Q950391		ALPHA-CHLORDANE			< .032	mg/kg		
BLA02	Q950391		GAMMA-CHLORDANE			< .032	mg/kg		
BLA02	Q950391		TOXAPHENE			< .064	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1016			< .032	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1221			< .032	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1232			< .032	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1242			< .032	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1248			< .032	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1254			< .064	mg/kg		
BLA02	Q950391		PCB AROCHLOR 1260			< .064	mg/kg		
LCS	Q950392		GAMMA-BHC (LINDANE)	.017		.012	mg/kg	70.6	
LCS	Q950392		HEPTACHLOR	.017		.014	mg/kg	82.4	
LCS	Q950392		ALDRIN	.017		.014	mg/kg	82.4	
LCS	Q950392		DIELDRIN	.033		.028	mg/kg	84.8	
LCS	Q950392		ENDRIN	.033		.029	mg/kg	87.9	
LCS	Q950392		4,4'-DDT	.033		.031	mg/kg	93.9	

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Zimmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314366
	Complete	PO Number
	14-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 13:35

Sample Description

SAMPLE ID: D-061594-WP-098
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 21-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: B. SHRAKE — Review Date: 22-JUN-94 — File ID: 2019-2020 — Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	0948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
SPI01	0948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DPS01	0948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
DUP01	0948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	0948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	0948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : A. WOOD — Analysis Date: 17-JUN-94 — Test: G401.7.0
Reviewer: C. BOYLE — Review Date: 17-JUN-94 — File ID: 3953-3955 — Run: R220552

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0945101	H121432	SOLIDS	13		13	Percent		0
LCS01	0945100		SOLIDS	11.2877		11.2871	Grams	100	
SAMPLE	A314366		See Certificate of Analysis						
LCS01	0945102		SOLIDS	12.2406		12.2402	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954629		CYANIDE	.1		.095	mg/L	95	
BLA01	0954630		CYANIDE			-.001	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0954631		CYANIDE	.1		.088	mg/L	88	
BLA01	0954632		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	Q940872	A314366	ALUMINUM	7680		8000	mg/kg		4
CDL01	Q956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	Q956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	Q956535	INORGANIC	ALUMINUM	5.00		5.43	mg/L	109	
BLA01	Q956534	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q940868	SPEX	ALUMINUM	20.0		18.6	mg/L	93	
BLA02	Q940869	NA	ALUMINUM			.145	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q956533	INORGANIC	ALUMINUM	5.00		5.21	mg/L	104	
BLA01	Q956532	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q957391	PERKIN ELM	ANTIMONY	0.400		0.413	mg/L	103	
DUP02	Q940872	A314366	ANTIMONY	0		BDL	mg/kg		
CDL01	Q957383	PERKIN ELM	ANTIMONY	0.120		0.134	mg/L	112	
CCV	Q957399	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	Q957401	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q940868	SPEX	ANTIMONY	5.00		4.06	mg/L	81	
BLA02	Q940869	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q957404	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q957410	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q957451	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	Q940872	A314366	BARIUM	30.3		28.4	mg/kg		7
SPI02	Q940870	A314366	BARIUM	30.3	200	213	mg/kg	91	
CDL01	Q956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	Q956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	Q956535	INORGANIC	BARIUM	5.00		5.05	mg/L	101	
BLA01	Q956534	NA	BARIUM			< 0.004	mg/L		
LCS	Q940868	SPEX	BARIUM	20.0		18.5	mg/L	93	
BLA02	Q940869	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q956533	INORGANIC	BARIUM	5.00		4.95	mg/L	99	
BLA01	Q956532	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0940872	A314366	BERYLLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	BERYLLIUM	0	5.00	4.94	mg/kg	99	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956535	INORGANIC	BERYLLIUM	5.00		4.96	mg/L	99	
BLA01	0956534	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0940868	SPEX	BERYLLIUM	0.500		0.449	mg/L	90	
BLA02	0940869	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0956533	INORGANIC	BERYLLIUM	5.00		4.87	mg/L	97	
BLA01	0956532	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	CADMIUM	0.400		0.406	mg/L	102	
DUP02	0940872	A314366	CADMIUM	0		BDL	mg/kg		
CDL01	0957379	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	0957378	PERKIN ELM	CADMIUM	1.00		0.892	mg/L	89	
CCV	0957399	INORGANIC	CADMIUM	5.00		4.90	mg/L	98	
BLA01	0957401	NA	CADMIUM			< 0.002	mg/L		
BLA02	0940869	NA	CADMIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	CADMIUM	.5		0.417	mg/L	83	
SAMPLE	A314366		See Certificate of Analysis						
CCV	0957404	INORGANIC	CADMIUM	5.00		4.88	mg/L	98	
BLA01	0957410	NA	CADMIUM			< 0.002	mg/L		
CDL01	0957451	PERKIN ELM	CADMIUM	0.010		0.0104	mg/L	104	
ICS-A	0957448	PERKIN ELM	CADMIUM	1.00		0.883	mg/L	88	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957387	SPEX	CALCIUM	100		99.0	mg/L	99	
DUP02	0940872	A314366	CALCIUM	39200		32500	mg/kg		19
ICS-A	0957378	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	0957399	INORGANIC	CALCIUM	50.0		50.4	mg/L	101	
BLA01	0957401	NA	CALCIUM			< 0.08	mg/L		
LCS	0940868	SPEX	CALCIUM	100		88.8	mg/L	89	
BLA02	0940869	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0957404	INORGANIC	CALCIUM	50.0		50.2	mg/L	100	
BLA01	0957410	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0957448	PERKIN ELM	CALCIUM	500		468.	mg/L	94	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q961579	PERKIN ELM	CHROMIUM	0.400		0.410	mg/L	103	
DUP02	Q953020	A314366	CHROMIUM	10.6		10.1	mg/kg		5
SPI02	Q953018	A314366	CHROMIUM	10.6	20.0	29.1	mg/kg	93	
CDL01	Q961699	PERKIN ELM	CHROMIUM	0.020		0.0220	mg/L	110	
ICS-A	Q961700	PERKIN ELM	CHROMIUM	0.500		0.484	mg/L	97	
CCV	Q961701	INORGANIC	CHROMIUM	5.00		4.90	mg/L	98	
BLA01	Q961712	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q953016	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q953017	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q961713	INORGANIC	CHROMIUM	5.00		4.97	mg/L	99	
BLA01	Q961714	NA	CHROMIUM			< 0.004	mg/L		

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	Q940872	A314366	COBALT	7.50		7.18	mg/kg		4
SPI02	Q940870	A314366	COBALT	7.50	50.0	51.0	mg/kg	87	
CDL01	Q956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	Q956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q956535	INORGANIC	COBALT	5.00		4.97	mg/L	99	
BLA01	Q956534	NA	COBALT			.0101	mg/L		
LCS	Q940868	SPEX	COBALT	5.00		4.48	mg/L	90	
BLA02	Q940869	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q956533	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	Q956532	NA	COBALT			.0115	mg/L		
CDL01	Q956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	Q956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	Q940872	A314366	COPPER	12.2		12.7	mg/kg		4
SPI02	Q940870	A314366	COPPER	12.2	25.0	34.9	mg/kg	91	
CDL01	Q956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	Q956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	Q956535	INORGANIC	COPPER	5.00		5.08	mg/L	102	
BLA01	Q956534	NA	COPPER			< 0.008	mg/L		
LCS	Q940868	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q940869	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q956533	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q956532	NA	COPPER			< 0.008	mg/L		
CDL01	Q956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	Q956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0940872	A314366	IRON	16500		16500	mg/kg		0
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957399	INORGANIC	IRON	5.00		4.81	mg/L	96	
BLA01	0957401	NA	IRON			< 0.01	mg/L		
LCS	0940868	SPEX	IRON	10.0		8.81	mg/L	88	
BLA02	0940869	NA	IRON			.217	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0957404	INORGANIC	IRON	5.00		4.79	mg/L	96	
BLA01	0957410	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0940872	A314366	MAGNESIUM	12200		12800	mg/kg		5
SPI02	0940870	A314366	MAGNESIUM	12200	10000	21500	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956535	INORGANIC	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	0956534	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0940868	SPEX	MAGNESIUM	100		87.8	mg/L	88	
BLA02	0940869	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0956533	INORGANIC	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	0956532	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	MANGANESE	0.400		0.401	mg/L	100	
DUP02	0952898	A314366	MANGANESE	219		170	mg/kg		25
CDL01	0958212	INORGANIC	MANGANESE	10		10.1	mg/L	101	
ICS-A	0958210	PERKIN ELM	MANGANESE	0.500		0.490	mg/L	98	
CCV	0958160	INORGANIC	MANGANESE	5.00		4.86	mg/L	97	
BLA01	0958159	NA	MANGANESE			< 0.004	mg/L		
LCS	0952894	SPEX	MANGANESE	5.00		4.19	mg/L	84	
BLA02	0952895	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0958153	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0958152	NA	MANGANESE			< 0.004	mg/L		
CDL01	0958255	PERKIN ELM	MANGANESE	0.030		0.0327	mg/L	109	
ICS-A	0958256	PERKIN ELM	MANGANESE	0.500		0.471	mg/L	94	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0961579	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
DUP02	0953020	A314366	NICKEL	12.0		11.5	mg/kg		4
SPI02	0953018	A314366	NICKEL	12.0	50.0	55.6	mg/kg	87	
CDL01	0961699	PERKIN ELM	NICKEL	0.080		0.0916	mg/L	115	
ICS-A	0961700	PERKIN ELM	NICKEL	1.00		0.923	mg/L	92	
CCV	0961701	INORGANIC	NICKEL	5.00		4.91	mg/L	98	
BLA01	0961712	NA	NICKEL			< 0.004	mg/L		
LCS	0953016	SPEX	NICKEL	5.00		4.29	mg/L	86	
BLA02	0953017	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0961713	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	0961714	NA	NICKEL			< 0.004	mg/L		

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	0940872	A314366	POTASSIUM	1510		1560	mg/kg		3
SPI02	0940870	A314366	POTASSIUM	1510	10000	11100	mg/kg	96	
CCV	0956535	INORGANIC	POTASSIUM	50.0		51.5	mg/L	103	
BLA01	0956534	NA	POTASSIUM			< 0.08	mg/L		
LCS	0940868	SPEX	POTASSIUM	100		92.9	mg/L	93	
BLA02	0940869	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0956533	INORGANIC	POTASSIUM	50.0		51.5	mg/L	103	
BLA01	0956532	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0940872	A314366	SILVER	0		1.35	mg/kg		30
SPI02	0940870	A314366	SILVER	0	5.00	6.09	mg/kg	122	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956535	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	0956534	NA	SILVER			< 0.004	mg/L		
LCS	0940868	SPEX	SILVER	0.500		0.443	mg/L	89	
BLA02	0940869	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0956533	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956532	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	Q960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	Q940872	A314366	SODIUM	84.2		86.8	mg/kg		3
SPI02	Q940870	A314366	SODIUM	84.2	10000	9420	mg/kg	93	
CCV	Q960814	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q960815	NA	SODIUM			< 0.08	mg/L		
LCS	Q940868	SPEX	SODIUM	100		90.0	mg/L	90	
BLA02	Q940869	NA	SODIUM			.346	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q960825	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q960826	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	Q940872	A314366	VANADIUM	15.9		17.1	mg/kg		7
SPI02	Q940870	A314366	VANADIUM	15.9	50.0	61.1	mg/kg	90	
CDL01	Q956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	Q956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	Q956535	INORGANIC	VANADIUM	5.00		5.06	mg/L	101	
BLA01	Q956536	NA	VANADIUM			< 0.004	mg/L		
LCS	Q940868	SPEX	VANADIUM	5.00		4.56	mg/L	91	
BLA02	Q940869	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q956533	INORGANIC	VANADIUM	5.00		4.96	mg/L	99	
BLA01	Q956532	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	Q956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q961579	PERKIN ELM	ZINC	0.400		0.420	mg/L	105	
DUP02	Q953020	A314366	ZINC	61.9		69.7	mg/kg		12
SPI02	Q953018	A314366	ZINC	61.9	50.0	118.	mg/kg	112	
CDL01	Q961699	PERKIN ELM	ZINC	0.040		0.0506	mg/L	127	
ICS-A	Q961700	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	Q961701	INORGANIC	ZINC	5.00		4.95	mg/L	99	
BLA01	Q961712	NA	ZINC			< 0.008	mg/L		
LCS	Q953016	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q953017	NA	ZINC			.0316	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q961713	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q961714	NA	ZINC			< 0.008	mg/L		

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 08-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 11-JUL-94 File ID: Run: R222940

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0961343	PERKIN-ELM	ARSENIC	.04		0.0385	mg/L	96
DUP02	0953020	A314366	ARSENIC	0		BDL	mg/kg	
SPI02	0953018	A314366	ARSENIC	0	200	190.	mg/kg	95
CDL01	0961345	INORGANIC	ARSENIC	.5		0.498	mg/L	100
CCV	0961351	INORGANIC	ARSENIC	.1		0.0998	mg/L	100
BLA01	0961352	NA	ARSENIC			< 0.002	mg/L	
LCS	0953021	INORGANIC	ARSENIC	.5		0.450	mg/L	90
BLA02	0953022	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A314366		See Certificate of Analysis					
CCV	0961353	INORGANIC	ARSENIC	.1		0.100	mg/L	100
BLA01	0961354	NA	ARSENIC			< 0.002	mg/L	
CDL01	0961355	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	0940872	A314366	SELENIUM	108.		110.	mg/kg		2
SPI02	0940870	A314366	SELENIUM	108.	200	278.	mg/kg	85	
CDL01	0958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	0958980	INORGANIC	SELENIUM	.1		0.0914	mg/L	91	
BLA01	0958979	NA	SELENIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	SELENIUM	.5		0.408	mg/L	82	
BLA02	0940874	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	0958977	NA	SELENIUM			< 0.002	mg/L		
CDL01	0958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	0940872	A314366	THALLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	THALLIUM	0	300	280.	mg/kg	93	
CDL01	0958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	0958980	INORGANIC	THALLIUM	.1		0.0943	mg/L	94	
BLA01	0958979	NA	THALLIUM			< 0.004	mg/L		
LCS	0940873	INORGANIC	THALLIUM	.5		0.422	mg/L	84	
BLA02	0940874	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	0958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	0958977	NA	THALLIUM			< 0.004	mg/L		
CDL01	0958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	Q940872	A314366	LEAD	13.1		14.4	mg/kg		10
SPI02	Q940870	A314366	LEAD	13.1	50	55.2	mg/kg	84	
CDL01	Q958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	Q958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	Q958980	INORGANIC	LEAD	.1		0.0922	mg/L	92	
BLA01	Q958979	NA	LEAD			< 0.002	mg/L		
LCS	Q940873	INORGANIC	LEAD	.5		0.437	mg/L	87	
BLA02	Q940874	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314366		See Certificate of Analysis						
CCV	Q958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	Q958977	NA	LEAD			< 0.002	mg/L		
CDL01	Q958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	Q958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 23-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 23-JUN-94 File ID: 000735 Run: R221078

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q948554		MERCURY	.00147		.00131	mg/L	89.1	
CDL01	Q948558		MERCURY	.0002		.00021	mg/L	105	
CCV	Q948559		MERCURY	.003		.00273	mg/L	91	
BLA01	Q948560		MERCURY			< .0002	mg/L		
SAMPLE	A314366		See Certificate of Analysis						

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. NAZUR Analysis Date: 27-JUN-94 Instrument: GC/MS VOA Test: O510.9.0
Reviewer: A. BRADBURN Review Date: 01-JUL-94 File ID: >6129C Run: R222291

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q956809	A314166	1,1-DICHLOROETHENE	0	50	51.7	ug/L	103.4	
SPI01	Q956809	A314166	TRICHLOROETHENE	0	50	48.3	ug/L	96.6	
SPI01	Q956809	A314166	BENZENE	0	50	53.5	ug/L	107	
SPI01	Q956809	A314166	TOLUENE	0	50	62.7	ug/L	125.4	
SPI01	Q956809	A314166	CHLOROBENZENE	0	50	49.2	ug/L	98.4	
DPS01	Q956810	A314166	1,1-DICHLOROETHENE	0	50	50.5	ug/L	101	2.3
DPS01	Q956810	A314166	TRICHLOROETHENE	0	50	47.6	ug/L	95.2	1.5
DPS01	Q956810	A314166	BENZENE	0	50	55	ug/L	110	2.8
DPS01	Q956810	A314166	TOLUENE	0	50	70.7	ug/L	141.4	12
DPS01	Q956810	A314166	CHLOROBENZENE	0	50	47.4	ug/L	94.8	3.7
CCV	Q956807		See Attached Report g6120c.ind						
BLA01	Q956808		See Attached Report g6121c.ind						
SAMPLE	A314366		See Certificate of Analysis						

Comments

Q956809 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q956810 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 30-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 07-JUL-94 File ID: >7802H Run: R222520

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
DPS02	Q948746	A314368	PHENOL	0	3300	2340	ug/kg	70.9	
DPS02	Q948746	A314368	2-CHLOROPHENOL	0	3300	2420	ug/kg	73.3	.8
DPS02	Q948746	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	.9
DPS02	Q948746	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2370	ug/kg	71.8	5.4
DPS02	Q948746	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2340	ug/kg	70.9	1.7
DPS02	Q948746	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2250	ug/kg	68.2	.9
DPS02	Q948746	A314368	ACENAPHTHENE	0	3300	2400	ug/kg	72.7	.8
DPS02	Q948746	A314368	4-NITROPHENOL	0	3300	1720	ug/kg	52.1	10.5
DPS02	Q948746	A314368	2,4-DINITROTOLUENE	0	3300	2170	ug/kg	65.8	.9
DPS02	Q948746	A314368	PENTACHLOROPHENOL	0	3300	742	ug/kg	22.5	8.8
DPS02	Q948746	A314368	PYRENE	0	3300	2860	ug/kg	86.7	1
SPI02	Q948745	A314368	PHENOL	0	3300	2310	ug/kg	70	
SPI02	Q948745	A314368	2-CHLOROPHENOL	0	3300	2400	ug/kg	72.7	
SPI02	Q948745	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2240	ug/kg	67.9	
SPI02	Q948745	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2500	ug/kg	75.8	
SPI02	Q948745	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2380	ug/kg	72.1	
SPI02	Q948745	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2270	ug/kg	68.8	
SPI02	Q948745	A314368	ACENAPHTHENE	0	3300	2380	ug/kg	72.1	
SPI02	Q948745	A314368	4-NITROPHENOL	0	3300	1910	ug/kg	57.9	
SPI02	Q948745	A314368	2,4-DINITROTOLUENE	0	3300	2190	ug/kg	66.4	
SPI02	Q948745	A314368	PENTACHLOROPHENOL	0	3300	679	ug/kg	20.6	
SPI02	Q948745	A314368	PYRENE	0	3300	2890	ug/kg	87.6	
CCV	Q958401		See Attached Report g7795h.ind						
BLA01	Q958402		See Attached Report g7796h.ind						
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314366		See Certificate of Analysis						

Comments

Q948746 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q948745 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 28-JUN-94 File ID: 5158 Run: R221764

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q950393	A314368	GAMMA-BHC (LINDANE)	0	.017	.0099	mg/kg	58.2	
SPI02	Q950393	A314368	HEPTACHLOR	0	.017	.012	mg/kg	70.6	
SPI02	Q950393	A314368	ALDRIN	0	.017	.011	mg/kg	64.7	
SPI02	Q950393	A314368	DIELDRIN	0	.033	.024	mg/kg	72.7	
SPI02	Q950393	A314368	ENDRIN	0	.033	.024	mg/kg	72.7	
SPI02	Q950393	A314368	4,4'-DDT	0	.033	.026	mg/kg	78.8	
DPS02	Q950394	A314368	GAMMA-BHC (LINDANE)	0	.017	.01	mg/kg	58.8	1
DPS02	Q950394	A314368	HEPTACHLOR	0	.017	.013	mg/kg	76.5	8
DPS02	Q950394	A314368	ALDRIN	0	.017	.012	mg/kg	70.6	8.7
DPS02	Q950394	A314368	DIELDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	ENDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	4,4'-DDT	0	.033	.027	mg/kg	81.8	3.7
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314366		See Certificate of Analysis						
BLA02	Q950391		ALPHA-BHC			< .0032	mg/kg		
BLA02	Q950391		BETA-BHC			< .0032	mg/kg		
BLA02	Q950391		DELTA-BHC			< .0032	mg/kg		
BLA02	Q950391		GAMMA-BHC (LINDANE)			< .0032	mg/kg		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0950391		HEPTACHLOR			< .0032	mg/kg		
BLA02	0950391		ALDRIN			< .0032	mg/kg		
BLA02	0950391		HEPTACHLOR EPOXIDE			< .0032	mg/kg		
BLA02	0950391		ENDOSULFAN I			< .0032	mg/kg		
BLA02	0950391		DIELDRIN			< .0064	mg/kg		
BLA02	0950391		4,4'-DDE			< .0064	mg/kg		
BLA02	0950391		ENDRIN			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN II			< .0064	mg/kg		
BLA02	0950391		4,4'-DDD			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN SULFATE			< .0064	mg/kg		
BLA02	0950391		4,4'-DDT			< .0064	mg/kg		
BLA02	0950391		METHOXYCHLOR			< .032	mg/kg		
BLA02	0950391		ENDRIN KETONE			< .0064	mg/kg		
BLA02	0950391		ALPHA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		GAMMA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		TOXAPHENE			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1016			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1221			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1232			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1242			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1248			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1254			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1260			< .064	mg/kg		
LCS	0950392		GAMMA-BHC (LINDANE)	.017		.012	mg/kg	70.6	
LCS	0950392		HEPTACHLOR	.017		.014	mg/kg	82.4	
LCS	0950392		ALDRIN	.017		.014	mg/kg	82.4	
LCS	0950392		DIELDRIN	.033		.028	mg/kg	84.8	
LCS	0950392		ENDRIN	.033		.029	mg/kg	87.9	
LCS	0950392		4,4'-DDT	.033		.031	mg/kg	93.9	

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC.	16-JUN-94	A314367
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number
7901 W. MORRIS ST.	14-JUL-94	5369-50
INDIANAPOLIS, IN 46231	Printed	Sampled
(317)243-8305	14-JUL-94	15-JUN-94 14:45

Sample Description

SAMPLE ID: D-061594-WP-100
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 21-JUN-94 — Instrument: TOC — Test: 0401.0.0
Reviewer: B. SHRAKE — Review Date: 22-JUN-94 — File ID: 2019-2020 — Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	0948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
SPI01	0948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DPS01	0948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
DUP01	0948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	0948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	0948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : A. WOOD — Analysis Date: 17-JUN-94 — Test: G401.7.0
Reviewer: C. BOYLE — Review Date: 17-JUN-94 — File ID: 3953-3955 — Run: R220552

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0945101	H121432	SOLIDS	13		13	Percent		0
LCS01	0945100		SOLIDS	11.2877		11.2871	Grams	100	
SAMPLE	A314367		See Certificate of Analysis						
LCS01	0945102		SOLIDS	12.2406		12.2402	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954606		CYANIDE	.1		.101	mg/L	101	
BLA01	0954607		CYANIDE			-.001	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0940872	A314366	ALUMINUM	7680		8000	mg/kg		4
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956533	INORGANIC	ALUMINUM	5.00		5.21	mg/L	104	
BLA01	0956532	NA	ALUMINUM			< 0.02	mg/L		
LCS	0940868	SPEX	ALUMINUM	20.0		18.6	mg/L	93	
BLA02	0940869	NA	ALUMINUM			.145	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	ALUMINUM	5.00		5.14	mg/L	103	
BLA01	0956530	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	ANTIMONY	0.400		0.413	mg/L	103	
DUP02	0940872	A314366	ANTIMONY	0		BDL	mg/kg		
CDL01	0957383	PERKIN ELM	ANTIMONY	0.120		0.134	mg/L	112	
CCV	0957399	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	0957401	NA	ANTIMONY			< 0.012	mg/L		
LCS	0940868	SPEX	ANTIMONY	5.00		4.06	mg/L	81	
BLA02	0940869	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0957404	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0957410	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0957451	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0940872	A314366	BARIUM	30.3		28.4	mg/kg		7
SP102	0940870	A314366	BARIUM	30.3	200	213	mg/kg	91	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956533	INORGANIC	BARIUM	5.00		4.95	mg/L	99	
BLA01	0956532	NA	BARIUM			< 0.004	mg/L		
LCS	0940868	SPEX	BARIUM	20.0		18.5	mg/L	93	
BLA02	0940869	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	BARIUM	5.00		4.94	mg/L	99	
BLA01	0956530	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0940872	A314366	BERYLLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	BERYLLIUM	0	5.00	4.94	mg/kg	99	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956533	INORGANIC	BERYLLIUM	5.00		4.87	mg/L	97	
BLA01	0956532	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0940868	SPEX	BERYLLIUM	0.500		0.449	mg/L	90	
BLA02	0940869	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	BERYLLIUM	5.00		4.86	mg/L	97	
BLA01	0956530	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	CADMIUM	0		BDL	mg/kg		
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956533	INORGANIC	CADMIUM	5.00		4.87	mg/L	97	
BLA01	0956532	NA	CADMIUM			< 0.002	mg/L		
BLA02	0940869	NA	CADMIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	CADMIUM	.5		0.417	mg/L	83	
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	CADMIUM	5.00		4.86	mg/L	97	
BLA01	0956530	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957387	SPEX	CALCIUM	100		99.0	mg/L	99	
DUP02	0940872	A314366	CALCIUM	39200		32500	mg/kg		19
ICS-A	0957378	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	0957399	INORGANIC	CALCIUM	50.0		50.4	mg/L	101	
BLA01	0957401	NA	CALCIUM			< 0.08	mg/L		
LCS	0940868	SPEX	CALCIUM	100		88.8	mg/L	89	
BLA02	0940869	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0957404	INORGANIC	CALCIUM	50.0		50.2	mg/L	100	
BLA01	0957410	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0957448	PERKIN ELM	CALCIUM	500		468.	mg/L	94	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q961579	PERKIN ELM	CHROMIUM	0.400		0.410	mg/L	103	
DUP02	Q953020	A314366	CHROMIUM	10.6		10.1	mg/kg		5
SPI02	Q953018	A314366	CHROMIUM	10.6	20.0	29.1	mg/kg	93	
CDL01	Q961699	PERKIN ELM	CHROMIUM	0.020		0.0220	mg/L	110	
ICS-A	Q961700	PERKIN ELM	CHROMIUM	0.500		0.484	mg/L	97	
CCV	Q961713	INORGANIC	CHROMIUM	5.00		4.97	mg/L	99	
BLA01	Q961714	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q953016	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q953017	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	Q961715	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	Q961716	NA	CHROMIUM			< 0.004	mg/L		

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	Q940872	A314366	COBALT	7.50		7.18	mg/kg		4
SPI02	Q940870	A314366	COBALT	7.50	50.0	51.0	mg/kg	87	
CDL01	Q956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	Q956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q956533	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	Q956532	NA	COBALT			.0115	mg/L		
LCS	Q940868	SPEX	COBALT	5.00		4.48	mg/L	90	
BLA02	Q940869	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	Q956531	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	Q956530	NA	COBALT			.0106	mg/L		
CDL01	Q956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	Q956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	Q940872	A314366	COPPER	12.2		12.7	mg/kg		4
SPI02	Q940870	A314366	COPPER	12.2	25.0	34.9	mg/kg	91	
CDL01	Q956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	Q956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	Q956533	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q956532	NA	COPPER			< 0.008	mg/L		
LCS	Q940868	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	Q940869	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	Q956531	INORGANIC	COPPER	5.00		4.97	mg/L	99	
BLA01	Q956530	NA	COPPER			< 0.008	mg/L		
CDL01	Q956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	Q956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0940872	A314366	IRON	16500		16500	mg/kg		0
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957399	INORGANIC	IRON	5.00		4.81	mg/L	96	
BLA01	0957401	NA	IRON			< 0.01	mg/L		
LCS	0940868	SPEX	IRON	10.0		8.81	mg/L	88	
BLA02	0940869	NA	IRON			.217	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0957404	INORGANIC	IRON	5.00		4.79	mg/L	96	
BLA01	0957410	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0940872	A314366	MAGNESIUM	12200		12800	mg/kg		5
SPI02	0940870	A314366	MAGNESIUM	12200	10000	21500	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956533	INORGANIC	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	0956532	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0940868	SPEX	MAGNESIUM	100		87.8	mg/L	88	
BLA02	0940869	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	MAGNESIUM	50.0		49.1	mg/L	98	
BLA01	0956530	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	MANGANESE	0.400		0.401	mg/L	100	
DUP02	0952898	A314366	MANGANESE	219		170	mg/kg		25
CDL01	0958212	INORGANIC	MANGANESE	10		10.1	mg/L	101	
ICS-A	0958210	PERKIN ELM	MANGANESE	0.500		0.490	mg/L	98	
CCV	0958153	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0958152	NA	MANGANESE			< 0.004	mg/L		
LCS	0952894	SPEX	MANGANESE	5.00		4.19	mg/L	84	
BLA02	0952895	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0958220	INORGANIC	MANGANESE	5.00		4.88	mg/L	98	
BLA01	0958221	NA	MANGANESE			< 0.004	mg/L		
CDL01	0958255	PERKIN ELM	MANGANESE	0.030		0.0327	mg/L	109	
ICS-A	0958256	PERKIN ELM	MANGANESE	0.500		0.471	mg/L	94	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0961579	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
DUP02	0953020	A314366	NICKEL	12.0		11.5	mg/kg		4
SPI02	0953018	A314366	NICKEL	12.0	50.0	55.6	mg/kg	87	
CDL01	0961699	PERKIN ELM	NICKEL	0.080		0.0916	mg/L	115	
ICS-A	0961700	PERKIN ELM	NICKEL	1.00		0.923	mg/L	92	
CCV	0961713	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	0961714	NA	NICKEL			< 0.004	mg/L		
LCS	0953016	SPEX	NICKEL	5.00		4.29	mg/L	86	
BLA02	0953017	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0961715	INORGANIC	NICKEL	5.00		4.96	mg/L	99	
BLA01	0961716	NA	NICKEL			< 0.004	mg/L		

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	0940872	A314366	POTASSIUM	1510		1560	mg/kg		3
SPI02	0940870	A314366	POTASSIUM	1510	10000	11100	mg/kg	96	
CCV	0956533	INORGANIC	POTASSIUM	50.0		51.5	mg/L	103	
BLA01	0956532	NA	POTASSIUM			< 0.08	mg/L		
LCS	0940868	SPEX	POTASSIUM	100		92.9	mg/L	93	
BLA02	0940869	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	POTASSIUM	50.0		51.0	mg/L	102	
BLA01	0956530	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0940872	A314366	SILVER	0		1.35	mg/kg		30
SPI02	0940870	A314366	SILVER	0	5.00	6.09	mg/kg	122	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956533	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956532	NA	SILVER			< 0.004	mg/L		
LCS	0940868	SPEX	SILVER	0.500		0.443	mg/L	89	
BLA02	0940869	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956530	NA	SILVER			.0106	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: RZZZ869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0940872	A314366	SODIUM	84.2		86.8	mg/kg		3
SPI02	0940870	A314366	SODIUM	84.2	10000	9420	mg/kg	93	
CCV	0960814	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960815	NA	SODIUM			< 0.08	mg/L		
LCS	0940868	SPEX	SODIUM	100		90.0	mg/L	90	
BLA02	0940869	NA	SODIUM			.346	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0960825	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	0960826	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: RZZZ271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0940872	A314366	VANADIUM	15.9		17.1	mg/kg		7
SPI02	0940870	A314366	VANADIUM	15.9	50.0	61.1	mg/kg	90	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956533	INORGANIC	VANADIUM	5.00		4.96	mg/L	99	
BLA01	0956532	NA	VANADIUM			< 0.004	mg/L		
LCS	0940868	SPEX	VANADIUM	5.00		4.56	mg/L	91	
BLA02	0940869	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0956531	INORGANIC	VANADIUM	5.00		4.95	mg/L	99	
BLA01	0956530	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: RZZZ988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0961579	PERKIN ELM	ZINC	0.400		0.420	mg/L	105	
DUP02	0953020	A314366	ZINC	61.9		69.7	mg/kg		12
SPI02	0953018	A314366	ZINC	61.9	50.0	118.	mg/kg	112	
CDL01	0961699	PERKIN ELM	ZINC	0.040		0.0506	mg/L	127	
ICS-A	0961700	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0961713	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	0961714	NA	ZINC			< 0.008	mg/L		
LCS	0953016	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	0953017	NA	ZINC			.0316	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0961715	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	0961716	NA	ZINC			< 0.008	mg/L		

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 08-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 11-JUL-94 File ID: Run: R222940

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0961343	PERKIN-ELM	ARSENIC	.04		0.0385	mg/L	96
DUP02	0953020	A314366	ARSENIC	0		BDL	mg/kg	
SPI02	0953018	A314366	ARSENIC	0	200	190.	mg/kg	95
CDL01	0961345	INORGANIC	ARSENIC	.5		0.498	mg/L	100
CCV	0961351	INORGANIC	ARSENIC	.1		0.0998	mg/L	100
BLA01	0961352	NA	ARSENIC			< 0.002	mg/L	
LCS	0953021	INORGANIC	ARSENIC	.5		0.450	mg/L	90
BLA02	0953022	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A314367		See Certificate of Analysis					
CCV	0961353	INORGANIC	ARSENIC	.1		0.100	mg/L	100
BLA01	0961354	NA	ARSENIC			< 0.002	mg/L	
CDL01	0961355	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	0940872	A314366	SELENIUM	108.		110.	mg/kg		2
SPI02	0940870	A314366	SELENIUM	108.	200	278.	mg/kg	85	
CDL01	0958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	0958980	INORGANIC	SELENIUM	.1		0.0914	mg/L	91	
BLA01	0958979	NA	SELENIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	SELENIUM	.5		0.408	mg/L	82	
BLA02	0940874	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	0958977	NA	SELENIUM			< 0.002	mg/L		
CDL01	0958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	0940872	A314366	THALLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	THALLIUM	0	300	280.	mg/kg	93	
CDL01	0958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	0958980	INORGANIC	THALLIUM	.1		0.0943	mg/L	94	
BLA01	0958979	NA	THALLIUM			< 0.004	mg/L		
LCS	0940873	INORGANIC	THALLIUM	.5		0.422	mg/L	84	
BLA02	0940874	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	0958977	NA	THALLIUM			< 0.004	mg/L		
CDL01	0958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	0940872	A314366	LEAD	13.1		14.4	mg/kg		10
SPI02	0940870	A314366	LEAD	13.1	50	55.2	mg/kg	84	
CDL01	0958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	0958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	0958980	INORGANIC	LEAD	.1		0.0922	mg/L	92	
BLA01	0958979	NA	LEAD			< 0.002	mg/L		
LCS	0940873	INORGANIC	LEAD	.5		0.437	mg/L	87	
BLA02	0940874	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314367		See Certificate of Analysis						
CCV	0958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	0958977	NA	LEAD			< 0.002	mg/L		
CDL01	0958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	0958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 23-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 23-JUN-94 File ID: 000735 Run: R221078

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948554		MERCURY	.00147		.00131	mg/L	89.1	
CDL01	0948558		MERCURY	.0002		.00021	mg/L	105	
CCV	0948559		MERCURY	.003		.00273	mg/L	91	
BLA01	0948560		MERCURY			< .0002	mg/L		
SAMPLE	A314367		See Certificate of Analysis						

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : R. SWAMP Analysis Date: 29-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 06-JUL-94 File ID: >6168C Run: R222579

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0958752	A314179	1,1-DICHLOROETHENE	0	50	48.9	ug/kg	97.8	
SPI01	0958752	A314179	TRICHLOROETHENE	0	50	39.9	ug/kg	79.8	
SPI01	0958752	A314179	BENZENE	0	50	56.1	ug/kg	112.2	
SPI01	0958752	A314179	TOLUENE	0	50	91.2	ug/kg	182.4	
SPI01	0958752	A314179	CHLOROBENZENE	0	50	38.5	ug/kg	77	
DPS01	0958753	A314179	1,1-DICHLOROETHENE	0	50	60.3	ug/kg	120.6	20.9
DPS01	0958753	A314179	TRICHLOROETHENE	0	50	45.7	ug/kg	91.4	13.6
DPS01	0958753	A314179	BENZENE	0	50	52.9	ug/kg	105.8	5.9
DPS01	0958753	A314179	TOLUENE	0	50	79.1	ug/kg	158.2	14.2
DPS01	0958753	A314179	CHLOROBENZENE	0	50	49	ug/kg	98	24
CCV	0958797		See Attached Report g6160c.ind						
BLA01	0958798		See Attached Report g6161c.ind						
SAMPLE	A314367		See Certificate of Analysis						
LCS01	0958799		1,1,2,2-TETRACHLOROETHANE	20		18.1	ug/kg	90.5	
LCS01	0958799		TOLUENE	20		22.1	ug/kg	110.5	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 30-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 07-JUL-94 File ID: >7803H Run: R222520

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
DPS02	Q948746	A314368	PHENOL	0	3300	2340	ug/kg	70.9	1.3
DPS02	Q948746	A314368	2-CHLOROPHENOL	0	3300	2420	ug/kg	73.3	.8
DPS02	Q948746	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	.9
DPS02	Q948746	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2370	ug/kg	71.8	5.4
DPS02	Q948746	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2340	ug/kg	70.9	1.7
DPS02	Q948746	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2250	ug/kg	68.2	.9
DPS02	Q948746	A314368	ACENAPHTHENE	0	3300	2400	ug/kg	72.7	.8
DPS02	Q948746	A314368	4-NITROPHENOL	0	3300	1720	ug/kg	52.1	10.5
DPS02	Q948746	A314368	2,4-DINITROTOLUENE	0	3300	2170	ug/kg	65.8	.9
DPS02	Q948746	A314368	PENTACHLOROPHENOL	0	3300	742	ug/kg	22.5	8.8
DPS02	Q948746	A314368	PYRENE	0	3300	2860	ug/kg	86.7	1
SPI02	Q948745	A314368	PHENOL	0	3300	2310	ug/kg	70	
SPI02	Q948745	A314368	2-CHLOROPHENOL	0	3300	2400	ug/kg	72.7	
SPI02	Q948745	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2240	ug/kg	67.9	
SPI02	Q948745	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2500	ug/kg	75.8	
SPI02	Q948745	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2380	ug/kg	72.1	
SPI02	Q948745	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2270	ug/kg	68.8	
SPI02	Q948745	A314368	ACENAPHTHENE	0	3300	2380	ug/kg	72.1	
SPI02	Q948745	A314368	4-NITROPHENOL	0	3300	1910	ug/kg	57.9	
SPI02	Q948745	A314368	2,4-DINITROTOLUENE	0	3300	2190	ug/kg	66.4	
SPI02	Q948745	A314368	PENTACHLOROPHENOL	0	3300	679	ug/kg	20.6	
SPI02	Q948745	A314368	PYRENE	0	3300	2890	ug/kg	87.6	
CCV	Q958401		See Attached Report g7795h.ind						
BLA01	Q958402		See Attached Report g7796h.ind						
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314367		See Certificate of Analysis						

Comments

Q948746 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q948745 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0305.1.0
Reviewer: L. JULIAN Review Date: 28-JUN-94 File ID: 5158 Run: R221764

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q950393	A314368	GAMMA-BHC (LINDANE)	0	.017	.0099	mg/kg	58.2	
SPI02	Q950393	A314368	HEPTACHLOR	0	.017	.012	mg/kg	70.6	
SPI02	Q950393	A314368	ALDRIN	0	.017	.011	mg/kg	64.7	
SPI02	Q950393	A314368	DIELDRIN	0	.033	.024	mg/kg	72.7	
SPI02	Q950393	A314368	ENDRIN	0	.033	.024	mg/kg	72.7	
SPI02	Q950393	A314368	4,4'-DDT	0	.033	.026	mg/kg	78.8	
DPS02	Q950394	A314368	GAMMA-BHC (LINDANE)	0	.017	.01	mg/kg	58.8	1
DPS02	Q950394	A314368	HEPTACHLOR	0	.017	.013	mg/kg	76.5	8
DPS02	Q950394	A314368	ALDRIN	0	.017	.012	mg/kg	70.6	8.7
DPS02	Q950394	A314368	DIELDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	ENDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	4,4'-DDT	0	.033	.027	mg/kg	81.8	3.7
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314367		See Certificate of Analysis						
BLA02	Q950391		ALPHA-BHC			< .0032	mg/kg		
BLA02	Q950391		BETA-BHC			< .0032	mg/kg		
BLA02	Q950391		DELTA-BHC			< .0032	mg/kg		
BLA02	Q950391		GAMMA-BHC (LINDANE)			< .0032	mg/kg		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0950391		HEPTACHLOR			< .0032	mg/kg		
BLA02	0950391		ALDRIN			< .0032	mg/kg		
BLA02	0950391		HEPTACHLOR EPOXIDE			< .0032	mg/kg		
BLA02	0950391		ENDOSULFAN I			< .0032	mg/kg		
BLA02	0950391		DIELDRIN			< .0064	mg/kg		
BLA02	0950391		4,4'-DDE			< .0064	mg/kg		
BLA02	0950391		ENDRIN			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN II			< .0064	mg/kg		
BLA02	0950391		4,4'-DDD			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN SULFATE			< .0064	mg/kg		
BLA02	0950391		4,4'-DDT			< .0064	mg/kg		
BLA02	0950391		METHOXYCHLOR			< .032	mg/kg		
BLA02	0950391		ENDRIN KETONE			< .0064	mg/kg		
BLA02	0950391		ALPHA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		GAMMA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		TOXAPHENE			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1016			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1221			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1232			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1242			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1248			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1254			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1260			< .064	mg/kg		
LCS	0950392		GAMMA-BHC (LINDANE)	.017		.012	mg/kg	70.6	
LCS	0950392		HEPTACHLOR	.017		.014	mg/kg	82.4	
LCS	0950392		ALDRIN	.017		.014	mg/kg	82.4	
LCS	0950392		DIELDRIN	.033		.028	mg/kg	84.8	
LCS	0950392		ENDRIN	.033		.029	mg/kg	87.9	
LCS	0950392		4,4'-DDT	.033		.031	mg/kg	93.9	

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: N. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	16-JUN-94	A314368
	Complete	PO Number
	14-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 15:30

Sample Description

SAMPLE ID: D-061594-WP-102
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 21-JUN-94 — Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 22-JUN-94 — File ID: 2019-2020 — Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	Q948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
SPI01	Q948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DPS01	Q948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
DUP01	Q948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	Q948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	Q948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	Q948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	Q948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	Q948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : A. WOOD — Analysis Date: 17-JUN-94 — Test: G401.7.0
Reviewer: C. BOYLE — Review Date: 17-JUN-94 — File ID: 3953-3955 — Run: R220552

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q945101	H121432	SOLIDS	13		13	Percent		0
LCS01	Q945100		SOLIDS	11.2877		11.2871	Grams	100	
SAMPLE	A314368		See Certificate of Analysis						
LCS01	Q945102		SOLIDS	12.2406		12.2402	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221995

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q954598		CYANIDE	.234		.213	mg/L	91	
ICV01	Q954624		CYANIDE	.247		.252	mg/L	102	
ICV01	Q954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	Q954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	Q954597		CYANIDE	.01		.01	mg/L	100	
CCV	Q954609		CYANIDE	.1		.099	mg/L	99	
BLA01	Q954610		CYANIDE			-.001	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	Q954615		CYANIDE	.1		.099	mg/L	99	
BLA01	Q954616		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0940872	A314366	ALUMINUM	7680		8000	mg/kg		4
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956533	INORGANIC	ALUMINUM	5.00		5.21	mg/L	104	
BLA01	0956532	NA	ALUMINUM			< 0.02	mg/L		
LCS	0940868	SPEX	ALUMINUM	20.0		18.6	mg/L	93	
BLA02	0940869	NA	ALUMINUM			.145	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	ALUMINUM	5.00		5.14	mg/L	103	
BLA01	0956530	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	ANTIMONY	0.400		0.413	mg/L	103	
DUP02	0940872	A314366	ANTIMONY	0		BDL	mg/kg		
CDL01	0957383	PERKIN ELM	ANTIMONY	0.120		0.134	mg/L	112	
CCV	0957399	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	0957401	NA	ANTIMONY			< 0.012	mg/L		
LCS	0940868	SPEX	ANTIMONY	5.00		4.06	mg/L	81	
BLA02	0940869	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0957404	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	0957410	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0957451	PERKIN ELM	ANTIMONY	0.120		0.126	mg/L	105	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0940872	A314366	BARIUM	30.3		28.4	mg/kg		7
SPI02	0940870	A314366	BARIUM	30.3	200	213	mg/kg	91	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956533	INORGANIC	BARIUM	5.00		4.95	mg/L	99	
BLA01	0956532	NA	BARIUM			< 0.004	mg/L		
LCS	0940868	SPEX	BARIUM	20.0		18.5	mg/L	93	
BLA02	0940869	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	BARIUM	5.00		4.94	mg/L	99	
BLA01	0956530	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0940872	A314366	BERYLLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	BERYLLIUM	0	5.00	4.94	mg/kg	99	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956533	INORGANIC	BERYLLIUM	5.00		4.87	mg/L	97	
BLA01	0956532	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0940868	SPEX	BERYLLIUM	0.500		0.449	mg/L	90	
BLA02	0940869	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	BERYLLIUM	5.00		4.86	mg/L	97	
BLA01	0956530	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	CADMIUM	0		BDL	mg/kg		
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956533	INORGANIC	CADMIUM	5.00		4.87	mg/L	97	
BLA01	0956532	NA	CADMIUM			< 0.002	mg/L		
BLA02	0940869	NA	CADMIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	CADMIUM	.5		0.417	mg/L	83	
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	CADMIUM	5.00		4.86	mg/L	97	
BLA01	0956530	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957387	SPEX	CALCIUM	100		99.0	mg/L	99	
DUP02	0940872	A314366	CALCIUM	39200		32500	mg/kg		19
ICS-A	0957378	PERKIN ELM	CALCIUM	500		470.	mg/L	94	
CCV	0957399	INORGANIC	CALCIUM	50.0		50.4	mg/L	101	
BLA01	0957401	NA	CALCIUM			< 0.08	mg/L		
LCS	0940868	SPEX	CALCIUM	100		88.8	mg/L	89	
BLA02	0940869	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0957404	INORGANIC	CALCIUM	50.0		50.2	mg/L	100	
BLA01	0957410	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0957448	PERKIN ELM	CALCIUM	500		468.	mg/L	94	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222968
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0961579	PERKIN ELM	CHROMIUM	0.400		0.410	mg/L	103	
DUP02	0953020	A314366	CHROMIUM	10.6		10.1	mg/kg		5
SPI02	0953018	A314366	CHROMIUM	10.6	20.0	29.1	mg/kg	93	
CDL01	0961699	PERKIN ELM	CHROMIUM	0.020		0.0220	mg/L	110	
ICS-A	0961700	PERKIN ELM	CHROMIUM	0.500		0.484	mg/L	97	
CCV	0961713	INORGANIC	CHROMIUM	5.00		4.97	mg/L	99	
BLA01	0961714	NA	CHROMIUM			< 0.004	mg/L		
LCS	0953016	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	0953017	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0961715	INORGANIC	CHROMIUM	5.00		4.94	mg/L	99	
BLA01	0961716	NA	CHROMIUM			< 0.004	mg/L		

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	COBALT	7.50		7.18	mg/kg		4
SPI02	0940870	A314366	COBALT	7.50	50.0	51.0	mg/kg	87	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956533	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	0956532	NA	COBALT			.0115	mg/L		
LCS	0940868	SPEX	COBALT	5.00		4.48	mg/L	90	
BLA02	0940869	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	COBALT	5.00		4.86	mg/L	97	
BLA01	0956530	NA	COBALT			.0106	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0940872	A314366	COPPER	12.2		12.7	mg/kg		4
SPI02	0940870	A314366	COPPER	12.2	25.0	34.9	mg/kg	91	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956533	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	0956532	NA	COPPER			< 0.008	mg/L		
LCS	0940868	SPEX	COPPER	2.50		2.29	mg/L	92	
BLA02	0940869	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	COPPER	5.00		4.97	mg/L	99	
BLA01	0956530	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222376
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0940872	A314366	IRON	16500		16500	mg/kg		0
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957399	INORGANIC	IRON	5.00		4.81	mg/L	96	
BLA01	0957401	NA	IRON			< 0.01	mg/L		
LCS	0940868	SPEX	IRON	10.0		8.81	mg/L	88	
BLA02	0940869	NA	IRON			.217	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0957404	INORGANIC	IRON	5.00		4.79	mg/L	96	
BLA01	0957410	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0940872	A314366	MAGNESIUM	12200		12800	mg/kg		5
SPI02	0940870	A314366	MAGNESIUM	12200	10000	21500	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956533	INORGANIC	MAGNESIUM	50.0		49.9	mg/L	100	
BLA01	0956532	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0940868	SPEX	MAGNESIUM	100		87.8	mg/L	88	
BLA02	0940869	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	MAGNESIUM	50.0		49.1	mg/L	98	
BLA01	0956530	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494
Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	MANGANESE	0.400		0.401	mg/L	100	
DUP02	0952898	A314366	MANGANESE	219		170	mg/kg		25
CDL01	0958212	INORGANIC	MANGANESE	10		10.1	mg/L	101	
ICS-A	0958210	PERKIN ELM	MANGANESE	0.500		0.490	mg/L	98	
CCV	0958153	INORGANIC	MANGANESE	5.00		4.87	mg/L	97	
BLA01	0958152	NA	MANGANESE			< 0.004	mg/L		
LCS	0952894	SPEX	MANGANESE	5.00		4.19	mg/L	84	
BLA02	0952895	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0958220	INORGANIC	MANGANESE	5.00		4.88	mg/L	98	
BLA01	0958221	NA	MANGANESE			< 0.004	mg/L		
CDL01	0958255	PERKIN ELM	MANGANESE	0.030		0.0327	mg/L	109	
ICS-A	0958256	PERKIN ELM	MANGANESE	0.500		0.471	mg/L	94	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0961579	PERKIN ELM	NICKEL	0.400		0.415	mg/L	104	
DUP02	0953020	A314366	NICKEL	12.0		11.5	mg/kg		4
SPI02	0953018	A314366	NICKEL	12.0	50.0	55.6	mg/kg	87	
CDL01	0961699	PERKIN ELM	NICKEL	0.080		0.0916	mg/L	115	
ICS-A	0961700	PERKIN ELM	NICKEL	1.00		0.923	mg/L	92	
CCV	0961713	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	0961714	NA	NICKEL			< 0.004	mg/L		
LCS	0953016	SPEX	NICKEL	5.00		4.29	mg/L	86	
BLA02	0953017	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0961715	INORGANIC	NICKEL	5.00		4.96	mg/L	99	
BLA01	0961716	NA	NICKEL			< 0.004	mg/L		

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	0940872	A314366	POTASSIUM	1510		1560	mg/kg		3
SPI02	0940870	A314366	POTASSIUM	1510	10000	11100	mg/kg	96	
CCV	0956533	INORGANIC	POTASSIUM	50.0		51.5	mg/L	103	
BLA01	0956532	NA	POTASSIUM			< 0.08	mg/L		
LCS	0940868	SPEX	POTASSIUM	100		92.9	mg/L	93	
BLA02	0940869	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	POTASSIUM	50.0		51.0	mg/L	102	
BLA01	0956530	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0940872	A314366	SILVER	0		1.35	mg/kg		30
SPI02	0940870	A314366	SILVER	0	5.00	6.09	mg/kg	122	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956533	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956532	NA	SILVER			< 0.004	mg/L		
LCS	0940868	SPEX	SILVER	0.500		0.443	mg/L	89	
BLA02	0940869	NA	SILVER			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	SILVER	1.00		1.01	mg/L	101	
BLA01	0956530	NA	SILVER			.0106	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0940872	A314366	SODIUM	84.2		86.8	mg/kg		3
SPI02	0940870	A314366	SODIUM	84.2	10000	9420	mg/kg	93	
CCV	0960814	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	0960815	NA	SODIUM			< 0.08	mg/L		
LCS	0940868	SPEX	SODIUM	100		90.0	mg/L	90	
BLA02	0940869	NA	SODIUM			.346	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0960825	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	0960826	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0940872	A314366	VANADIUM	15.9		17.1	mg/kg		7
SPI02	0940870	A314366	VANADIUM	15.9	50.0	61.1	mg/kg	90	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956533	INORGANIC	VANADIUM	5.00		4.96	mg/L	99	
BLA01	0956532	NA	VANADIUM			< 0.004	mg/L		
LCS	0940868	SPEX	VANADIUM	5.00		4.56	mg/L	91	
BLA02	0940869	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0956531	INORGANIC	VANADIUM	5.00		4.95	mg/L	99	
BLA01	0956530	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 11-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 12-JUL-94 File ID: Run: R222988

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0961579	PERKIN ELM	ZINC	0.400		0.420	mg/L	105	
DUP02	0953020	A314366	ZINC	61.9		69.7	mg/kg		12
SPI02	0953018	A314366	ZINC	61.9	50.0	118.	mg/kg	112	
CDL01	0961699	PERKIN ELM	ZINC	0.040		0.0506	mg/L	127	
ICS-A	0961700	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0961713	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	0961714	NA	ZINC			< 0.008	mg/L		
LCS	0953016	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	0953017	NA	ZINC			.0316	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0961715	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	0961716	NA	ZINC			< 0.008	mg/L		

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 08-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 11-JUL-94 File ID: Run: R222940

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0961343	PERKIN-ELM	ARSENIC	.04		0.0385	mg/L	96
DUP02	0953020	A314366	ARSENIC	0		BDL	mg/kg	
SPI02	0953018	A314366	ARSENIC	0	200	190.	mg/kg	95
CDL01	0961345	INORGANIC	ARSENIC	.5		0.498	mg/L	100
CCV	0961351	INORGANIC	ARSENIC	.1		0.0998	mg/L	100
BLA01	0961352	NA	ARSENIC			< 0.002	mg/L	
LCS	0953021	INORGANIC	ARSENIC	.5		0.450	mg/L	90
BLA02	0953022	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A314368		See Certificate of Analysis					
CCV	0961353	INORGANIC	ARSENIC	.1		0.100	mg/L	100
BLA01	0961354	NA	ARSENIC			< 0.002	mg/L	
CDL01	0961355	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	0940872	A314366	SELENIUM	108.		110.	mg/kg		2
SPI02	0940870	A314366	SELENIUM	108.	200	278.	mg/kg	85	
CDL01	0958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	0958980	INORGANIC	SELENIUM	.1		0.0914	mg/L	91	
BLA01	0958979	NA	SELENIUM			< 0.002	mg/L		
LCS	0940873	INORGANIC	SELENIUM	.5		0.408	mg/L	82	
BLA02	0940874	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	0958977	NA	SELENIUM			< 0.002	mg/L		
CDL01	0958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	0940872	A314366	THALLIUM	0		BDL	mg/kg		
SPI02	0940870	A314366	THALLIUM	0	300	280.	mg/kg	93	
CDL01	0958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	0958980	INORGANIC	THALLIUM	.1		0.0943	mg/L	94	
BLA01	0958979	NA	THALLIUM			< 0.004	mg/L		
LCS	0940873	INORGANIC	THALLIUM	.5		0.422	mg/L	84	
BLA02	0940874	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	0958977	NA	THALLIUM			< 0.004	mg/L		
CDL01	0958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	0940872	A314366	LEAD	13.1		14.4	mg/kg		10
SPI02	0940870	A314366	LEAD	13.1	50	55.2	mg/kg	84	
CDL01	0958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	0958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	0958980	INORGANIC	LEAD	.1		0.0922	mg/L	92	
BLA01	0958979	NA	LEAD			< 0.002	mg/L		
LCS	0940873	INORGANIC	LEAD	.5		0.437	mg/L	87	
BLA02	0940874	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314368		See Certificate of Analysis						
CCV	0958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	0958977	NA	LEAD			< 0.002	mg/L		
CDL01	0958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	0958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 23-JUN-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 23-JUN-94 File ID: 000735 Run: R221078

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948554		MERCURY	.00147		.00131	mg/L	89.1	
CDL01	0948558		MERCURY	.0002		.00021	mg/L	105	
CCV	0948559		MERCURY	.003		.00273	mg/L	91	
BLA01	0948560		MERCURY			< .0002	mg/L		
SAMPLE	A314368		See Certificate of Analysis						

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : R. SHAMP Analysis Date: 29-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 06-JUL-94 File ID: >6169C Run: R222579

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0958752	A314179	1,1-DICHLOROETHENE	0	50	48.9	ug/kg	97.8	
SPI01	0958752	A314179	TRICHLOROETHENE	0	50	39.9	ug/kg	79.8	
SPI01	0958752	A314179	BENZENE	0	50	56.1	ug/kg	112.2	
SPI01	0958752	A314179	TOLUENE	0	50	91.2	ug/kg	182.4	
SPI01	0958752	A314179	CHLOROBENZENE	0	50	38.5	ug/kg	77	
DPS01	0958753	A314179	1,1-DICHLOROETHENE	0	50	60.3	ug/kg	120.6	20.9
DPS01	0958753	A314179	TRICHLOROETHENE	0	50	45.7	ug/kg	91.4	13.6
DPS01	0958753	A314179	BENZENE	0	50	52.9	ug/kg	105.8	5.9
DPS01	0958753	A314179	TOLUENE	0	50	79.1	ug/kg	158.2	14.2
DPS01	0958753	A314179	CHLOROBENZENE	0	50	49	ug/kg	98	24
CCV	0958797		See Attached Report g6160c.ind						
BLA01	0958798		See Attached Report g6161c.ind						
SAMPLE	A314368		See Certificate of Analysis						
LCS01	0958799		1,1,2,2-TETRACHLOROETHANE	20		18.1	ug/kg	90.5	
LCS01	0958799		TOLUENE	20		22.1	ug/kg	110.5	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : J. MINNIEAR, II Analysis Date: 30-JUN-94 Instrument: GC/MS SVOA Test: 0505.3.0
Reviewer: A. BRADBURN Review Date: 07-JUL-94 File ID: >7800H Run: R222520

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
SP102	Q948745	A314368	PHENOL	0	3300	2310	ug/kg	70	
SP102	Q948745	A314368	2-CHLOROPHENOL	0	3300	2400	ug/kg	72.7	
SP102	Q948745	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2240	ug/kg	67.9	
SP102	Q948745	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2500	ug/kg	75.8	
SP102	Q948745	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2380	ug/kg	72.1	
SP102	Q948745	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2270	ug/kg	68.8	
SP102	Q948745	A314368	ACENAPHTHENE	0	3300	2380	ug/kg	72.1	
SP102	Q948745	A314368	4-NITROPHENOL	0	3300	1910	ug/kg	57.9	
SP102	Q948745	A314368	2,4-DINITROTOLUENE	0	3300	2190	ug/kg	66.4	
SP102	Q948745	A314368	PENTACHLOROPHENOL	0	3300	679	ug/kg	20.6	
SP102	Q948745	A314368	PYRENE	0	3300	2890	ug/kg	87.6	
DPS02	Q948746	A314368	PHENOL	0	3300	2340	ug/kg	70.9	1.3
DPS02	Q948746	A314368	2-CHLOROPHENOL	0	3300	2420	ug/kg	73.3	.8
DPS02	Q948746	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	.9
DPS02	Q948746	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2370	ug/kg	71.8	5.4
DPS02	Q948746	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2340	ug/kg	70.9	1.7
DPS02	Q948746	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2250	ug/kg	68.2	.9
DPS02	Q948746	A314368	ACENAPHTHENE	0	3300	2400	ug/kg	72.7	.8
DPS02	Q948746	A314368	4-NITROPHENOL	0	3300	1720	ug/kg	52.1	10.5
DPS02	Q948746	A314368	2,4-DINITROTOLUENE	0	3300	2170	ug/kg	65.8	.9
DPS02	Q948746	A314368	PENTACHLOROPHENOL	0	3300	742	ug/kg	22.5	8.8
DPS02	Q948746	A314368	PYRENE	0	3300	2860	ug/kg	86.7	1
CCV	Q958401		See Attached Report g7795h.ind						
BLA01	Q958402		See Attached Report g7796h.ind						
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314368		See Certificate of Analysis						

Comments

Q948745 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q948746 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0385.1.0
Reviewer: L. JULIAN Review Date: 28-JUN-94 File ID: 5158 Run: R221764

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q950393	A314368	GAMMA-BHC (LINDANE)	0	.017	.0099	mg/kg	58.2	
SP102	Q950393	A314368	HEPTACHLOR	0	.017	.012	mg/kg	70.6	
SP102	Q950393	A314368	ALDRIN	0	.017	.011	mg/kg	64.7	
SP102	Q950393	A314368	DIELDRIN	0	.033	.024	mg/kg	72.7	
SP102	Q950393	A314368	ENDRIN	0	.033	.024	mg/kg	72.7	
SP102	Q950393	A314368	4,4'-DDT	0	.033	.026	mg/kg	78.8	
DPS02	Q950394	A314368	GAMMA-BHC (LINDANE)	0	.017	.01	mg/kg	58.8	1
DPS02	Q950394	A314368	HEPTACHLOR	0	.017	.013	mg/kg	76.5	8
DPS02	Q950394	A314368	ALDRIN	0	.017	.012	mg/kg	70.6	8.7
DPS02	Q950394	A314368	DIELDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	ENDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	Q950394	A314368	4,4'-DDT	0	.033	.027	mg/kg	81.8	3.7
BLA02	Q962587		See Attached Report g7071f.ind						
SAMPLE	A314368		See Certificate of Analysis						
BLA02	Q950391		ALPHA-BHC			< .0032	mg/kg		
BLA02	Q950391		BETA-BHC			< .0032	mg/kg		
BLA02	Q950391		DELTA-BHC			< .0032	mg/kg		
BLA02	Q950391		GAMMA-BHC (LINDANE)			< .0032	mg/kg		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A314368

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0950391		HEPTACHLOR			< .0032	mg/kg		
BLA02	0950391		ALDRIN			< .0032	mg/kg		
BLA02	0950391		HEPTACHLOR EPOXIDE			< .0032	mg/kg		
BLA02	0950391		ENDOSULFAN I			< .0032	mg/kg		
BLA02	0950391		DIELDRIN			< .0064	mg/kg		
BLA02	0950391		4,4'-DDE			< .0064	mg/kg		
BLA02	0950391		ENDRIN			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN II			< .0064	mg/kg		
BLA02	0950391		4,4'-DDD			< .0064	mg/kg		
BLA02	0950391		ENDOSULFAN SULFATE			< .0064	mg/kg		
BLA02	0950391		4,4'-DDT			< .0064	mg/kg		
BLA02	0950391		METHOXYCHLOR			< .032	mg/kg		
BLA02	0950391		ENDRIN KETONE			< .0064	mg/kg		
BLA02	0950391		ALPHA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		GAMMA-CHLORDANE			< .032	mg/kg		
BLA02	0950391		TOXAPHENE			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1016			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1221			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1232			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1242			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1248			< .032	mg/kg		
BLA02	0950391		PCB AROCHLOR 1254			< .064	mg/kg		
BLA02	0950391		PCB AROCHLOR 1260			< .064	mg/kg		
LCS	0950392		GAMMA-BHC (LINDANE)	.017		.012	mg/kg	70.6	
LCS	0950392		HEPTACHLOR	.017		.014	mg/kg	82.4	
LCS	0950392		ALDRIN	.017		.014	mg/kg	82.4	
LCS	0950392		DIELDRIN	.033		.028	mg/kg	84.8	
LCS	0950392		ENDRIN	.033		.029	mg/kg	87.9	
LCS	0950392		4,4'-DDT	.033		.031	mg/kg	93.9	

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Hemmelle

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	17-JUN-94	A314585
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 17:55

Sample Description

SAMPLE ID: D-061594-WP-104 MS/MSD
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 21-JUN-94 — Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 22-JUN-94 — File ID: 2019-2020 — Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	0948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
DPS01	0948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
SPI01	0948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DUP01	0948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	0948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	0948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH — Analysis Date: 21-JUN-94 — Test: G601.7.0
Reviewer: B. PRIDEMORE — Review Date: 22-JUN-94 — File ID: 3962-3966 — Run: R220959

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0948313	A314791	SOLIDS	52		53	Percent		1.9
LCS01	0948309		SOLIDS	11.8297		11.8297	Grams	100	
SAMPLE	A314585		See Certificate of Analysis						
LCS01	0948340		SOLIDS	9.7414		9.7414	Percent	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES — Analysis Date: 29-JUN-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 30-JUN-94 — File ID: 1156 — Run: R221993

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954624		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0954615		CYANIDE	.1		.099	mg/L	99	
BLA01	0954616		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0945520	A314585	ALUMINUM	7940		8490	mg/kg		7
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956520	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	0956517	NA	ALUMINUM			< 0.02	mg/L		
LCS	0945516	SPEX	ALUMINUM	20.0		17.8	mg/L	89	
BLA02	0945517	NA	ALUMINUM			.146	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	ALUMINUM	5.00		5.23	mg/L	105	
BLA01	0956525	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	ANTIMONY	0.400		0.423	mg/L	106	
DUP02	0945520	A314585	ANTIMONY	0		BDL	mg/kg		
CDL01	0958213	PERKIN ELM	ANTIMONY	0.120		0.117	mg/L	98	
CCV	0958209	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	0958208	NA	ANTIMONY			< 0.012	mg/L		
LCS	0945516	SPEX	ANTIMONY	5.00		4.01	mg/L	80	
BLA02	0945517	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0958207	INORGANIC	ANTIMONY	1.00		1.03	mg/L	103	
BLA01	0958206	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0958255	PERKIN ELM	ANTIMONY	0.120		0.120	mg/L	100	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0945520	A314585	BARIUM	56.6		64.1	mg/kg		12
SP102	0945518	A314585	BARIUM	56.6	400	437.	mg/kg	95	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956520	INORGANIC	BARIUM	5.00		5.13	mg/L	103	
BLA01	0956517	NA	BARIUM			< 0.004	mg/L		
LCS	0945516	SPEX	BARIUM	20.0		17.8	mg/L	89	
BLA02	0945517	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	0956525	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101	
DUP02	0945520	A314585	BERYLLIUM	0		BDL	mg/kg		
SPI02	0945518	A314585	BERYLLIUM	0	10	9.38	mg/kg	94	
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	
CCV	0956520	INORGANIC	BERYLLIUM	5.00		5.03	mg/L	101	
BLA01	0956517	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0945516	SPEX	BERYLLIUM	0.500		0.431	mg/L	86	
BLA02	0945517	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	0956525	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100	
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	CADMIUM	0		BDL	mg/kg		
SPI02	0945518	A314585	CADMIUM	0	10	8.52	mg/kg	85	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956520	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	0956517	NA	CADMIUM			< 0.002	mg/L		
LCS	0945521	INORGANIC	CADMIUM	.5		0.418	mg/L	84	
BLA02	0945522	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CADMIUM	5.00		4.97	mg/L	99	
BLA01	0956525	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0945520	A314585	CALCIUM	844.		910.	mg/kg		8
SPI02	0945518	A314585	CALCIUM	844.	20000	19800	mg/kg	95	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956520	INORGANIC	CALCIUM	50.0		51.3	mg/L	103	
BLA01	0956517	NA	CALCIUM			< 0.08	mg/L		
LCS	0945516	SPEX	CALCIUM	100		86.7	mg/L	87	
BLA02	0945517	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CALCIUM	50.0		51.0	mg/L	102	
BLA01	0956525	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0945520	A314585	CHROMIUM	11.4		11.5	mg/kg		1
SPI02	0945518	A314585	CHROMIUM	11.4	40	47.8	mg/kg	91	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956520	INORGANIC	CHROMIUM	5.00		5.19	mg/L	104	
BLA01	0956517	NA	CHROMIUM			< 0.004	mg/L		
LCS	0945516	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	0945517	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CHROMIUM	5.00		5.02	mg/L	100	
BLA01	0956525	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	COBALT	5.06		5.61	mg/kg		10
SPI02	0945518	A314585	COBALT	5.06	100	96.4	mg/kg	91	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956520	INORGANIC	COBALT	5.00		5.03	mg/L	101	
BLA01	0956517	NA	COBALT			< 0.004	mg/L		
LCS	0945516	SPEX	COBALT	5.00		4.30	mg/L	86	
BLA02	0945517	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	COBALT	5.00		4.98	mg/L	100	
BLA01	0956525	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	COPPER	4.86		4.38	mg/kg		10
SPI02	0945518	A314585	COPPER	4.86	50	51.2	mg/kg	93	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956520	INORGANIC	COPPER	5.00		5.19	mg/L	104	
BLA01	0956517	NA	COPPER			< 0.008	mg/L		
LCS	0945516	SPEX	COPPER	2.50		2.20	mg/L	88	
BLA02	0945517	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	COPPER	5.00		5.07	mg/L	101	
BLA01	0956525	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0945520	A314585	IRON	5860		6660	mg/kg		13
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957470	INORGANIC	IRON	5.00		4.77	mg/L	95	
BLA01	0957471	NA	IRON			< 0.01	mg/L		
LCS	0945516	SPEX	IRON	10.0		8.32	mg/L	83	
BLA02	0945517	NA	IRON			.0434	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0957469	INORGANIC	IRON	5.00		4.78	mg/L	96	
BLA01	0957468	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0945520	A314585	MAGNESIUM	1060		1070	mg/kg		1
SPI02	0945518	A314585	MAGNESIUM	1060	20000	19600	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956520	INORGANIC	MAGNESIUM	50.0		51.0	mg/L	102	
BLA01	0956517	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0945516	SPEX	MAGNESIUM	100		85.0	mg/L	85	
BLA02	0945517	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	0956525	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0945520	A314585	MANGANESE	654.		741.	mg/kg		13
CDL01	0956436	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956520	INORGANIC	MANGANESE	5.00		5.11	mg/L	102	
BLA01	0956517	NA	MANGANESE			< 0.004	mg/L		
LCS	0945516	SPEX	MANGANESE	5.00		4.33	mg/L	87	
BLA02	0945517	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	MANGANESE	5.00		5.01	mg/L	100	
BLA01	0956525	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956524	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0945520	A314585	NICKEL	9.10		10.1	mg/kg		10
SPI02	0945518	A314585	NICKEL	9.10	100	97.8	mg/kg	89	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956520	INORGANIC	NICKEL	5.00		5.16	mg/L	103	
BLA01	0956517	NA	NICKEL			< 0.004	mg/L		
LCS	0945516	SPEX	NICKEL	5.00		4.25	mg/L	85	
BLA02	0945517	NA	NICKEL			.0119	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	0956525	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	0945520	A314585	POTASSIUM	390.		403.	mg/kg		3
SPI02	0945518	A314585	POTASSIUM	390.	20000	19800	mg/kg	97	
CCV	0956520	INORGANIC	POTASSIUM	50.0		52.8	mg/L	106	
BLA01	0956517	NA	POTASSIUM			< 0.08	mg/L		
LCS	0945516	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	0945517	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	POTASSIUM	50.0		52.2	mg/L	104	
BLA01	0956525	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0945520	A314585	SILVER	0		BDL	mg/kg		
SPI02	0945518	A314585	SILVER	0	10	11.8	mg/kg	118	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956520	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	0956517	NA	SILVER			.012	mg/L		
LCS	0945516	SPEX	SILVER	0.500		0.423	mg/L	85	
BLA02	0945517	NA	SILVER			.0106	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	0956525	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: W131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0945520	A314585	SODIUM	59.1		55.5	mg/kg		6
SPI02	0945518	A314585	SODIUM	59.1	20000	19600	mg/kg	98	
CCV	0960912	INORGANIC	SODIUM	50		52.0	mg/L	104	
BLA01	0960914	NA	SODIUM			< 0.08	mg/L		
LCS	0945516	SPEX	SODIUM	100		88.7	mg/L	89	
BLA02	0945517	NA	SODIUM			.286	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0960930	INORGANIC	SODIUM	50		52.5	mg/L	105	
BLA01	0960931	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: W138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0945520	A314585	VANADIUM	22.2		23.8	mg/kg		7
SPI02	0945518	A314585	VANADIUM	22.2	100	111.	mg/kg	89	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956520	INORGANIC	VANADIUM	5.00		5.13	mg/L	103	
BLA01	0956517	NA	VANADIUM			< 0.004	mg/L		
LCS	0945516	SPEX	VANADIUM	5.00		4.38	mg/L	88	
BLA02	0945517	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	VANADIUM	5.00		5.06	mg/L	101	
BLA01	0956525	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: W139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0945520	A314585	ZINC	40.1		38.0	mg/kg		5
SPI02	0945518	A314585	ZINC	40.1	100	131.	mg/kg	91	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956520	INORGANIC	ZINC	5.00		5.09	mg/L	102	
BLA01	0956517	NA	ZINC			< 0.008	mg/L		
LCS	0945516	SPEX	ZINC	5.00		4.29	mg/L	86	
BLA02	0945517	NA	ZINC			.0295	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	0956525	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0958986	PERKIN-ELM	ARSENIC	.04		0.0371	mg/L	93
DUP02	0945520	A314585	ARSENIC	0		BDL	mg/kg	
SPI02	0945518	A314585	ARSENIC	0	400	344.	mg/kg	86
CDL01	0958982	INORGANIC	ARSENIC	.5		0.497	mg/L	99
CCV	0958978	INORGANIC	ARSENIC	.1		0.0938	mg/L	94
BLA01	0958977	NA	ARSENIC			< 0.002	mg/L	
LCS	0945521	INORGANIC	ARSENIC	.5		0.415	mg/L	83
BLA02	0945522	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A314585		See Certificate of Analysis					
CDL01	0958976	PERKIN-ELM	ARSENIC	.02		0.0193	mg/L	97
CCV	0958974	INORGANIC	ARSENIC	.1		0.0935	mg/L	94
BLA01	0958973	NA	ARSENIC			< 0.002	mg/L	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M120.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	0945520	A314585	SELENIUM	79.4		88.2	mg/kg		11
SPI02	0945518	A314585	SELENIUM	79.4	400	443.	mg/kg	91	
CDL01	0958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	0958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	0958977	NA	SELENIUM			< 0.002	mg/L		
LCS	0945521	INORGANIC	SELENIUM	.5		0.405	mg/L	81	
BLA02	0945522	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	
CCV	0958974	INORGANIC	SELENIUM	.1		0.0901	mg/L	90	
BLA01	0958973	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	0945520	A314585	THALLIUM	0		BDL	mg/kg		
SPI02	0945518	A314585	THALLIUM	0	600	545.	mg/kg	91	
CDL01	0958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	0958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	0958977	NA	THALLIUM			< 0.004	mg/L		
LCS	0945521	INORGANIC	THALLIUM	.5		0.424	mg/L	85	
BLA02	0945522	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	
CCV	0958974	INORGANIC	THALLIUM	.1		0.0912	mg/L	91	
BLA01	0958973	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	0945520	A314585	LEAD	24.6		18.4	mg/kg		29
SPI02	0945518	A314585	LEAD	24.6	100	106.	mg/kg	81	
CDL01	0958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	0958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	0958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	0958977	NA	LEAD			< 0.002	mg/L		
LCS	0945521	INORGANIC	LEAD	.5		0.435	mg/L	87	
BLA02	0945522	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	0958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	
CCV	0958974	INORGANIC	LEAD	.1		0.0923	mg/L	92	
BLA01	0958973	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 01-JUL-94 Instrument: CVAA Test: M120.2.0
Reviewer: R. BYERS Review Date: 01-JUL-94 File ID: 000770 Run: R222337

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957145		MERCURY	.00147		.00127	mg/L	86.4	
DUP02	0949890	A314585	MERCURY	0		BDL	mg/kg		
SPI02	0949888	A314585	MERCURY	0	.25	.223	mg/kg	89.2	
CDL01	0957149		MERCURY	.0002		.000234	mg/L	117	
CCV	0957166		MERCURY	.003		.00267	mg/L	89	
BLA01	0957167		MERCURY			< .00008	mg/L		
LCS	0949886		MERCURY	.003		.00244	mg/L	81.3	
BLA02	0949887		MERCURY			< .00008	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
BLA01	0957168		MERCURY			< .00008	mg/L		
CCV	0957169		MERCURY	.003		.00284	mg/L	94.7	
CDL01	0957170		MERCURY	.0002		.000234	mg/L	117	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 27-JUN-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: A. BRADBURN Review Date: 01-JUL-94 File ID: >6132C Run: R222291

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0956809	A314166	1,1-DICHLOROETHENE	0	50	51.7	ug/L	103.4	
SPI01	0956809	A314166	TRICHLOROETHENE	0	50	48.3	ug/L	96.6	
SPI01	0956809	A314166	BENZENE	0	50	53.5	ug/L	107	
SPI01	0956809	A314166	TOLUENE	0	50	62.7	ug/L	125.4	
SPI01	0956809	A314166	CHLOROBENZENE	0	50	49.2	ug/L	98.4	
DPS01	0956810	A314166	1,1-DICHLOROETHENE	0	50	50.5	ug/L	101	2.3
DPS01	0956810	A314166	TRICHLOROETHENE	0	50	47.6	ug/L	95.2	1.5
DPS01	0956810	A314166	BENZENE	0	50	55	ug/L	110	2.8
DPS01	0956810	A314166	TOLUENE	0	50	70.7	ug/L	141.4	12
DPS01	0956810	A314166	CHLOROBENZENE	0	50	47.4	ug/L	94.8	3.7
CCV	0956807		See Attached Report g6120c.ind						
BLA01	0956808		See Attached Report g6121c.ind						
SAMPLE	A314585		See Certificate of Analysis						

Comments

Q956809 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	17-JUN-94	A314585
	Complete	PO Number
	13-JUL-94	5369-50
	Printed	Sampled
	14-JUL-94	15-JUN-94 17:55

Sample Description

SAMPLE ID: D-061594-WP-104 MS/MSD
PROJECT LOCATION: FOUR COUNTY LANDFILL
DESCRIPTION: SOIL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER Analysis Date: 21-JUN-94 Instrument: TOC Test: 0401.0.0
Reviewer: B. SHRAKE Review Date: 22-JUN-94 File ID: 2019-2020 Run: R221116

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0948983		TOTAL ORGANIC CARBON (TOC)	46.2		44.2	mg/L	95.7	
ICV01	0948998		TOTAL ORGANIC CARBON (TOC)	46.2		44.8	mg/L	97	
DPS01	0948992	A314583	TOTAL ORGANIC CARBON (TOC)	6.8	20	26.4	mg/L	98	
SPI01	0948995	A314368	TOTAL ORGANIC CARBON (TOC)	1680	2000	3470	mg/L	89.5	
DUP01	0948984	A313331	TOTAL ORGANIC CARBON (TOC)	21.7		21.4	mg/L		1.4
CDL01	0948982		TOTAL ORGANIC CARBON (TOC)	10		9.85	mg/L	98.5	
CCV	0948993		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948994		TOTAL ORGANIC CARBON (TOC)			-.314	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0948997		TOTAL ORGANIC CARBON (TOC)	50		50.4	mg/L	100.8	
BLA01	0948999		TOTAL ORGANIC CARBON (TOC)			.874	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : E. WALSH Analysis Date: 21-JUN-94 Test: G401.7.8
Reviewer: B. PRIDEMORE Review Date: 22-JUN-94 File ID: 3962-3966 Run: R220959

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0948313	A314791	SOLIDS	52		53	Percent		1.9
LCS01	0948309		SOLIDS	11.8297		11.8297	Grams	100	
SAMPLE	A314585		See Certificate of Analysis						
LCS01	0948340		SOLIDS	9.7414		9.7414	Percent	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES Analysis Date: 29-JUN-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 30-JUN-94 File ID: 1156 Run: R221995

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0954598		CYANIDE	.234		.213	mg/L	91	
ICV01	0954626		CYANIDE	.247		.252	mg/L	102	
ICV01	0954626		CYANIDE	.247		.235	mg/L	95.1	
ICV01	0954637		CYANIDE	.247		.238	mg/L	96.4	
CDL01	0954597		CYANIDE	.01		.01	mg/L	100	
CCV	0954609		CYANIDE	.1		.099	mg/L	99	
BLA01	0954610		CYANIDE			-.001	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0954615		CYANIDE	.1		.099	mg/L	99	
BLA01	0954616		CYANIDE			-.001	mg/L		

ALUMINUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	ALUMINUM	2.00		1.97	mg/L	99	
DUP02	0945520	A314585	ALUMINUM	7940		8490	mg/kg		7
CDL01	0956422	INORGANIC	ALUMINUM	10		9.86	mg/L	99	
ICS-A	0956435	PERKIN ELM	ALUMINUM	500		503.	mg/L	101	
CCV	0956520	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	0956517	NA	ALUMINUM			< 0.02	mg/L		
LCS	0945516	SPEX	ALUMINUM	20.0		17.8	mg/L	89	
BLA02	0945517	NA	ALUMINUM			.146	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	ALUMINUM	5.00		5.23	mg/L	105	
BLA01	0956525	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	0956524	PERKIN ELM	ALUMINUM	500		522.	mg/L	104	

ANTIMONY ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 06-JUL-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 07-JUL-94 File ID: Run: R222494

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958217	PERKIN ELM	ANTIMONY	0.400		0.423	mg/L	106	
DUP02	0945520	A314585	ANTIMONY	0		BDL	mg/kg		
CDL01	0958213	PERKIN ELM	ANTIMONY	0.120		0.117	mg/L	98	
CCV	0958209	INORGANIC	ANTIMONY	1.00		1.02	mg/L	102	
BLA01	0958208	NA	ANTIMONY			< 0.012	mg/L		
LCS	0945516	SPEX	ANTIMONY	5.00		4.01	mg/L	80	
BLA02	0945517	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0958207	INORGANIC	ANTIMONY	1.00		1.03	mg/L	103	
BLA01	0958206	NA	ANTIMONY			< 0.012	mg/L		
CDL01	0958255	PERKIN ELM	ANTIMONY	0.120		0.120	mg/L	100	

BARIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M106.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	BARIUM	2.00		2.02	mg/L	101	
DUP02	0945520	A314585	BARIUM	56.6		64.1	mg/kg		12
SPI02	0945518	A314585	BARIUM	56.6	400	437.	mg/kg	95	
CDL01	0956422	INORGANIC	BARIUM	10		9.89	mg/L	99	
ICS-A	0956435	PERKIN ELM	BARIUM	0.500		0.507	mg/L	101	
CCV	0956520	INORGANIC	BARIUM	5.00		5.13	mg/L	103	
BLA01	0956517	NA	BARIUM			< 0.004	mg/L		
LCS	0945516	SPEX	BARIUM	20.0		17.8	mg/L	89	
BLA02	0945517	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	BARIUM	5.00		5.04	mg/L	101	
BLA01	0956525	NA	BARIUM			< 0.004	mg/L		
ICS-A	0956524	PERKIN ELM	BARIUM	0.500		0.518	mg/L	104	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	0956427	PERKIN ELM	BERYLLIUM	0.400		0.402	mg/L	101
DUP02	0945520	A314585	BERYLLIUM	0		BDL	mg/kg	
SP102	0945518	A314585	BERYLLIUM	0	10	9.38	mg/kg	94
CDL01	0956434	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100
ICS-A	0956435	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96
CCV	0956520	INORGANIC	BERYLLIUM	5.00		5.03	mg/L	101
BLA01	0956517	NA	BERYLLIUM			< 0.002	mg/L	
LCS	0945516	SPEX	BERYLLIUM	0.500		0.431	mg/L	86
BLA02	0945517	NA	BERYLLIUM			< 0.002	mg/L	
SAMPLE	A314585		See Certificate of Analysis					
CCV	0956536	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99
BLA01	0956525	NA	BERYLLIUM			< 0.002	mg/L	
CDL01	0956523	PERKIN ELM	BERYLLIUM	0.010		0.00997	mg/L	100
ICS-A	0956524	PERKIN ELM	BERYLLIUM	0.500		0.499	mg/L	100

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CADMIUM	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	CADMIUM	0		BDL	mg/kg		
SP102	0945518	A314585	CADMIUM	0	10	8.52	mg/kg	85	
CDL01	0956434	PERKIN ELM	CADMIUM	0.010		0.0116	mg/L	116	
ICS-A	0956435	PERKIN ELM	CADMIUM	1.00		0.907	mg/L	91	
CCV	0956520	INORGANIC	CADMIUM	5.00		5.01	mg/L	100	
BLA01	0956517	NA	CADMIUM			< 0.002	mg/L		
LCS	0945521	INORGANIC	CADMIUM	.5		0.418	mg/L	84	
BLA02	0945522	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CADMIUM	5.00		4.97	mg/L	99	
BLA01	0956525	NA	CADMIUM			< 0.002	mg/L		
CDL01	0956523	PERKIN ELM	CADMIUM	0.010		0.0117	mg/L	117	
ICS-A	0956524	PERKIN ELM	CADMIUM	1.00		0.941	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	CALCIUM	100		97.4	mg/L	97	
DUP02	0945520	A314585	CALCIUM	844.		910.	mg/kg		8
SP102	0945518	A314585	CALCIUM	844.	20000	19800	mg/kg	95	
ICS-A	0956435	PERKIN ELM	CALCIUM	500		478.	mg/L	96	
CCV	0956520	INORGANIC	CALCIUM	50.0		51.3	mg/L	103	
BLA01	0956517	NA	CALCIUM			< 0.08	mg/L		
LCS	0945516	SPEX	CALCIUM	100		86.7	mg/L	87	
BLA02	0945517	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CALCIUM	50.0		51.0	mg/L	102	
BLA01	0956525	NA	CALCIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	CALCIUM	500		497.	mg/L	99	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	CHROMIUM	0.400		0.411	mg/L	103	
DUP02	0945520	A314585	CHROMIUM	11.4		11.5	mg/kg		1
SPI02	0945518	A314585	CHROMIUM	11.4	40	47.8	mg/kg	91	
CDL01	0956434	PERKIN ELM	CHROMIUM	0.020		0.0167	mg/L	84	
ICS-A	0956435	PERKIN ELM	CHROMIUM	0.500		0.482	mg/L	96	
CCV	0956520	INORGANIC	CHROMIUM	5.00		5.19	mg/L	104	
BLA01	0956517	NA	CHROMIUM			< 0.004	mg/L		
LCS	0945516	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	0945517	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	CHROMIUM	5.00		5.02	mg/L	100	
BLA01	0956525	NA	CHROMIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	CHROMIUM	0.020		0.0192	mg/L	96	
ICS-A	0956524	PERKIN ELM	CHROMIUM	0.500		0.497	mg/L	99	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COBALT	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	COBALT	5.06		5.61	mg/kg		10
SPI02	0945518	A314585	COBALT	5.06	100	96.4	mg/kg	91	
CDL01	0956434	PERKIN ELM	COBALT	0.100		0.106	mg/L	106	
ICS-A	0956435	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	0956520	INORGANIC	COBALT	5.00		5.03	mg/L	101	
BLA01	0956517	NA	COBALT			< 0.004	mg/L		
LCS	0945516	SPEX	COBALT	5.00		4.30	mg/L	86	
BLA02	0945517	NA	COBALT			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	COBALT	5.00		4.98	mg/L	100	
BLA01	0956525	NA	COBALT			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	COBALT	0.100		0.113	mg/L	113	
ICS-A	0956524	PERKIN ELM	COBALT	0.500		0.483	mg/L	97	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	COPPER	0.400		0.416	mg/L	104	
DUP02	0945520	A314585	COPPER	4.86		4.38	mg/kg		10
SPI02	0945518	A314585	COPPER	4.86	50	51.2	mg/kg	93	
CDL01	0956434	PERKIN ELM	COPPER	0.050		0.0584	mg/L	117	
ICS-A	0956435	PERKIN ELM	COPPER	0.500		0.470	mg/L	94	
CCV	0956520	INORGANIC	COPPER	5.00		5.19	mg/L	104	
BLA01	0956517	NA	COPPER			< 0.008	mg/L		
LCS	0945516	SPEX	COPPER	2.50		2.20	mg/L	88	
BLA02	0945517	NA	COPPER			< 0.008	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	COPPER	5.00		5.07	mg/L	101	
BLA01	0956525	NA	COPPER			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	COPPER	0.050		0.0655	mg/L	131	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0956524	PERKIN ELM	COPPER	0.500		0.486	mg/L	97	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 05-JUL-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 06-JUL-94 File ID: Run: R222374

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957391	PERKIN ELM	IRON	0.400		0.399	mg/L	100	
DUP02	0945520	A314585	IRON	5860		6660	mg/kg		13
CDL01	0957379	INORGANIC	IRON	10		9.66	mg/L	97	
ICS-A	0957378	PERKIN ELM	IRON	200		176.	mg/L	88	
CCV	0957470	INORGANIC	IRON	5.00		4.77	mg/L	95	
BLA01	0957471	NA	IRON			< 0.01	mg/L		
LCS	0945516	SPEX	IRON	10.0		8.32	mg/L	83	
BLA02	0945517	NA	IRON			.0434	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0957469	INORGANIC	IRON	5.00		4.78	mg/L	96	
BLA01	0957468	NA	IRON			< 0.01	mg/L		
ICS-A	0957448	PERKIN ELM	IRON	200		175.	mg/L	88	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956425	SPEX	MAGNESIUM	100		96.9	mg/L	97	
DUP02	0945520	A314585	MAGNESIUM	1060		1070	mg/kg		1
SPI02	0945518	A314585	MAGNESIUM	1060	20000	19600	mg/kg	93	
ICS-A	0956435	PERKIN ELM	MAGNESIUM	500		487.	mg/L	97	
CCV	0956520	INORGANIC	MAGNESIUM	50.0		51.0	mg/L	102	
BLA01	0956517	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0945516	SPEX	MAGNESIUM	100		85.0	mg/L	85	
BLA02	0945517	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	0956525	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	0956524	PERKIN ELM	MAGNESIUM	500		499.	mg/L	100	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	MANGANESE	0.400		0.405	mg/L	101	
DUP02	0945520	A314585	MANGANESE	654.		741.	mg/kg		13
CDL01	0956434	PERKIN ELM	MANGANESE	0.030		0.0317	mg/L	106	
ICS-A	0956435	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	0956520	INORGANIC	MANGANESE	5.00		5.11	mg/L	102	
BLA01	0956517	NA	MANGANESE			< 0.004	mg/L		
LCS	0945516	SPEX	MANGANESE	5.00		4.33	mg/L	87	
BLA02	0945517	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	MANGANESE	5.00		5.01	mg/L	100	
BLA01	0956525	NA	MANGANESE			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	MANGANESE	0.030		0.0348	mg/L	116	
ICS-A	0956526	PERKIN ELM	MANGANESE	0.500		0.511	mg/L	102	

NICKEL ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	NICKEL	0.400		0.422	mg/L	106	
DUP02	0945520	A314585	NICKEL	9.10		10.1	mg/kg		10
SPI02	0945518	A314585	NICKEL	9.10	100	97.8	mg/kg	89	
CDL01	0956434	PERKIN ELM	NICKEL	0.080		0.0861	mg/L	108	
ICS-A	0956435	PERKIN ELM	NICKEL	1.00		0.902	mg/L	90	
CCV	0956520	INORGANIC	NICKEL	5.00		5.16	mg/L	103	
BLA01	0956517	NA	NICKEL			< 0.004	mg/L		
LCS	0945516	SPEX	NICKEL	5.00		4.25	mg/L	85	
BLA02	0945517	NA	NICKEL			.0119	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	0956525	NA	NICKEL			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	NICKEL	0.080		0.0920	mg/L	115	
ICS-A	0956524	PERKIN ELM	NICKEL	1.00		0.937	mg/L	94	

POTASSIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	POTASSIUM	20.0		20.4	mg/L	102	
ICV01	0956425	SPEX	POTASSIUM	100		102.	mg/L	102	
DUP02	0945520	A314585	POTASSIUM	390.		403.	mg/kg		3
SPI02	0945518	A314585	POTASSIUM	390.	20000	19800	mg/kg	97	
CCV	0956520	INORGANIC	POTASSIUM	50.0		52.8	mg/L	106	
BLA01	0956517	NA	POTASSIUM			< 0.08	mg/L		
LCS	0945516	SPEX	POTASSIUM	100		89.4	mg/L	89	
BLA02	0945517	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	POTASSIUM	50.0		52.2	mg/L	104	
BLA01	0956525	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956426	PERKIN ELM	SILVER	2.00		2.01	mg/L	101	
DUP02	0945520	A314585	SILVER	0		BDL	mg/kg		
SPI02	0945518	A314585	SILVER	0	10	11.8	mg/kg	118	
CDL01	0956434	PERKIN ELM	SILVER	0.020		0.0326	mg/L	163	
ICS-A	0956435	PERKIN ELM	SILVER	1.00		1.03	mg/L	103	
CCV	0956520	INORGANIC	SILVER	1.00		1.05	mg/L	105	
BLA01	0956517	NA	SILVER			.012	mg/L		
LCS	0945516	SPEX	SILVER	0.500		0.423	mg/L	85	
BLA02	0945517	NA	SILVER			.0106	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	0956525	NA	SILVER			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	SILVER	0.020		0.0269	mg/L	135	
ICS-A	0956524	PERKIN ELM	SILVER	1.00		1.06	mg/L	106	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 08-JUL-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 11-JUL-94 File ID: Run: R222869

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0960738	PERKIN ELM	SODIUM	2		2.07	mg/L	104	
ICV01	0960737	SPEX	SODIUM	100		104.	mg/L	104	
DUP02	0945520	A314585	SODIUM	59.1		55.5	mg/kg		6
SPI02	0945518	A314585	SODIUM	59.1	20000	19600	mg/kg	98	
CCV	0960912	INORGANIC	SODIUM	50		52.0	mg/L	104	
BLA01	0960914	NA	SODIUM			< 0.08	mg/L		
LCS	0945516	SPEX	SODIUM	100		88.7	mg/L	89	
BLA02	0945517	NA	SODIUM			.286	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0960930	INORGANIC	SODIUM	50		52.5	mg/L	105	
BLA01	0960931	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	VANADIUM	0.400		0.408	mg/L	102	
DUP02	0945520	A314585	VANADIUM	22.2		23.8	mg/kg		7
SPI02	0945518	A314585	VANADIUM	22.2	100	111.	mg/kg	89	
CDL01	0956434	PERKIN ELM	VANADIUM	0.100		0.102	mg/L	102	
ICS-A	0956435	PERKIN ELM	VANADIUM	0.500		0.480	mg/L	96	
CCV	0956520	INORGANIC	VANADIUM	5.00		5.13	mg/L	103	
BLA01	0956517	NA	VANADIUM			< 0.004	mg/L		
LCS	0945516	SPEX	VANADIUM	5.00		4.38	mg/L	88	
BLA02	0945517	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	VANADIUM	5.00		5.06	mg/L	101	
BLA01	0956525	NA	VANADIUM			< 0.004	mg/L		
CDL01	0956523	PERKIN ELM	VANADIUM	0.100		0.107	mg/L	107	
ICS-A	0956524	PERKIN ELM	VANADIUM	0.500		0.495	mg/L	99	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 03-JUL-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 04-JUL-94 File ID: Run: R222271

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0956427	PERKIN ELM	ZINC	0.400		0.423	mg/L	106	
DUP02	0945520	A314585	ZINC	40.1		38.0	mg/kg		5
SPI02	0945518	A314585	ZINC	40.1	100	131.	mg/kg	91	
CDL01	0956434	PERKIN ELM	ZINC	0.040		0.0477	mg/L	119	
ICS-A	0956435	PERKIN ELM	ZINC	1.00		1.01	mg/L	101	
CCV	0956520	INORGANIC	ZINC	5.00		5.09	mg/L	102	
BLA01	0956517	NA	ZINC			< 0.008	mg/L		
LCS	0945516	SPEX	ZINC	5.00		4.29	mg/L	86	
BLA02	0945517	NA	ZINC			.0295	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CCV	0956536	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	0956525	NA	ZINC			< 0.008	mg/L		
CDL01	0956523	PERKIN ELM	ZINC	0.040		0.0508	mg/L	127	
ICS-A	0956524	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	ARSENIC	.04		0.0371	mg/L	93	
DUP02	0945520	A314585	ARSENIC	0		BDL	mg/kg		
SPI02	0945518	A314585	ARSENIC	0	400	344.	mg/kg	86	
CDL01	0958982	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
CCV	0958978	INORGANIC	ARSENIC	.1		0.0938	mg/L	94	
BLA01	0958977	NA	ARSENIC			< 0.002	mg/L		
LCS	0945521	INORGANIC	ARSENIC	.5		0.415	mg/L	83	
BLA02	0945522	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	ARSENIC	.02		0.0193	mg/L	97	
CCV	0958974	INORGANIC	ARSENIC	.1		0.0935	mg/L	94	
BLA01	0958973	NA	ARSENIC			< 0.002	mg/L		

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	SELENIUM	.04		0.0378	mg/L	95	
DUP02	0945520	A314585	SELENIUM	79.4		88.2	mg/kg		11
SPI02	0945518	A314585	SELENIUM	79.4	400	443.	mg/kg	91	
CDL01	0958982	INORGANIC	SELENIUM	.5		0.496	mg/L	99	
CCV	0958978	INORGANIC	SELENIUM	.1		0.0906	mg/L	91	
BLA01	0958977	NA	SELENIUM			< 0.002	mg/L		
LCS	0945521	INORGANIC	SELENIUM	.5		0.405	mg/L	81	
BLA02	0945522	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	SELENIUM	.01		0.00904	mg/L	90	
CCV	0958974	INORGANIC	SELENIUM	.1		0.0901	mg/L	90	
BLA01	0958973	NA	SELENIUM			< 0.002	mg/L		

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0958986	PERKIN-ELM	THALLIUM	.04		0.0383	mg/L	96	
DUP02	0945520	A314585	THALLIUM	0		BDL	mg/kg		
SPI02	0945518	A314585	THALLIUM	0	600	545.	mg/kg	91	
CDL01	0958982	INORGANIC	THALLIUM	.5		0.501	mg/L	100	
CCV	0958978	INORGANIC	THALLIUM	.1		0.0918	mg/L	92	
BLA01	0958977	NA	THALLIUM			< 0.004	mg/L		
LCS	0945521	INORGANIC	THALLIUM	.5		0.424	mg/L	85	
BLA02	0945522	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	THALLIUM	.02		0.0215	mg/L	108	
CCV	0958974	INORGANIC	THALLIUM	.1		0.0912	mg/L	91	
BLA01	0958973	NA	THALLIUM			< 0.004	mg/L		

LEAD TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 06-JUL-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 07-JUL-94 File ID: Run: R222609

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	0958986	PERKIN-ELM	LEAD	.04		0.0374	mg/L	94	
DUP02	0945520	A314585	LEAD	24.6		18.4	mg/kg		29
SPI02	0945518	A314585	LEAD	24.6	100	106.	mg/kg	81	
CDL01	0958982	INORGANIC	LEAD	.5		0.496	mg/L	99	
ICS-A	0958981	PERKIN ELM	LEAD	1		0.871	mg/L	87	
CCV	0958978	INORGANIC	LEAD	.1		0.0907	mg/L	91	
BLA01	0958977	NA	LEAD			< 0.002	mg/L		
LCS	0945521	INORGANIC	LEAD	.5		0.435	mg/L	87	
BLA02	0945522	NA	LEAD			< 0.002	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
CDL01	0958976	PERKIN-ELM	LEAD	.006		0.00660	mg/L	110	
ICS-A	0958975	PERKIN ELM	LEAD	1		0.870	mg/L	87	
CCV	0958974	INORGANIC	LEAD	.1		0.0923	mg/L	92	
BLA01	0958973	NA	LEAD			< 0.002	mg/L		

MERCURY CVAA SW846-7471(MOD)

Analyst : K. BUCKNER Analysis Date: 01-JUL-94 Instrument: CVAA Test: M120.2.0
Reviewer: R. BYERS Review Date: 01-JUL-94 File ID: 000770 Run: R222337

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0957145		MERCURY	.00147		.00127	mg/L	86.4	
DUP02	0949890	A314585	MERCURY	0		BDL	mg/kg		
SPI02	0949888	A314585	MERCURY	0	.25	.223	mg/kg	89.2	
CDL01	0957149		MERCURY	.0002		.000234	mg/L	117	
CCV	0957166		MERCURY	.003		.00267	mg/L	89	
BLA01	0957167		MERCURY			< .00008	mg/L		
LCS	0949886		MERCURY	.003		.00244	mg/L	81.3	
BLA02	0949887		MERCURY			< .00008	mg/L		
SAMPLE	A314585		See Certificate of Analysis						
BLA01	0957168		MERCURY			< .00008	mg/L		
CCV	0957169		MERCURY	.003		.00284	mg/L	94.7	
CDL01	0957170		MERCURY	.0002		.000234	mg/L	117	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 27-JUN-94 Instrument: GC/MS VOA Test: O510.9.0
Reviewer: A. BRADBURN Review Date: 01-JUL-94 File ID: >6132C Run: R222291

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	0956809	A314166	1,1-DICHLOROETHENE	0	50	51.7	ug/L	103.4	
SPI01	0956809	A314166	TRICHLOROETHENE	0	50	48.3	ug/L	96.6	
SPI01	0956809	A314166	BENZENE	0	50	53.5	ug/L	107	
SPI01	0956809	A314166	TOLUENE	0	50	62.7	ug/L	125.4	
SPI01	0956809	A314166	CHLOROBENZENE	0	50	49.2	ug/L	98.4	
DPS01	0956810	A314166	1,1-DICHLOROETHENE	0	50	50.5	ug/L	101	2.3
DPS01	0956810	A314166	TRICHLOROETHENE	0	50	47.6	ug/L	95.2	1.5
DPS01	0956810	A314166	BENZENE	0	50	55	ug/L	110	2.8
DPS01	0956810	A314166	TOLUENE	0	50	70.7	ug/L	141.4	12
DPS01	0956810	A314166	CHLOROBENZENE	0	50	47.4	ug/L	94.8	3.7
CCV	0956807		See Attached Report g6120c.ind						
BLA01	0956808		See Attached Report g6121c.ind						
SAMPLE	A314585		See Certificate of Analysis						

Comments

0956809 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

Comments

Q956810 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 05-JUL-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 06-JUL-94 File ID: >02648 Run: R222532

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	0948746	A314368	PHENOL	0	3300	2340	ug/kg	70.9	1.3
DPS02	0948746	A314368	2-CHLOROPHENOL	0	3300	2420	ug/kg	73.3	.8
DPS02	0948746	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2220	ug/kg	67.3	.9
DPS02	0948746	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2370	ug/kg	71.8	5.4
DPS02	0948746	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2340	ug/kg	70.9	1.7
DPS02	0948746	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2250	ug/kg	68.2	.9
DPS02	0948746	A314368	ACENAPHTHENE	0	3300	2400	ug/kg	72.7	.8
DPS02	0948746	A314368	4-NITROPHENOL	0	3300	1720	ug/kg	52.1	10.5
DPS02	0948746	A314368	2,4-DINITROTOLUENE	0	3300	2170	ug/kg	65.8	.9
DPS02	0948746	A314368	PENTACHLOROPHENOL	0	3300	742	ug/kg	22.5	8.8
DPS02	0948746	A314368	PYRENE	0	3300	2860	ug/kg	86.7	1
SPI02	0948745	A314368	PHENOL	0	3300	2310	ug/kg	70	
SPI02	0948745	A314368	2-CHLOROPHENOL	0	3300	2400	ug/kg	72.7	
SPI02	0948745	A314368	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2240	ug/kg	67.9	
SPI02	0948745	A314368	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2500	ug/kg	75.8	
SPI02	0948745	A314368	1,2,4-TRICHLOROBENZENE	0	3300	2380	ug/kg	72.1	
SPI02	0948745	A314368	4-CHLORO-3-METHYLPHENOL	0	3300	2270	ug/kg	68.8	
SPI02	0948745	A314368	ACENAPHTHENE	0	3300	2380	ug/kg	72.1	
SPI02	0948745	A314368	4-NITROPHENOL	0	3300	1910	ug/kg	57.9	
SPI02	0948745	A314368	2,4-DINITROTOLUENE	0	3300	2190	ug/kg	66.4	
SPI02	0948745	A314368	PENTACHLOROPHENOL	0	3300	679	ug/kg	20.6	
SPI02	0948745	A314368	PYRENE	0	3300	2890	ug/kg	87.6	
CCV	0958500		See Attached Report g0252b.ind						
BLA02	0962587		See Attached Report g7071f.ind						
SAMPLE	A314585		See Certificate of Analysis						

Comments

Q948746 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.
Q948745 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. DOBBINS Analysis Date: 27-JUN-94 Instrument: GC/ECD Test: 0505.1.0

Reviewer: L. JULIAN Review Date: 28-JUN-94 File ID: 5158 Run: R221764

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0950393	A314368	GAMMA-BHC (LINDANE)	0	.017	.0099	mg/kg	58.2	
SPI02	0950393	A314368	HEPTACHLOR	0	.017	.012	mg/kg	70.6	
SPI02	0950393	A314368	ALDRIN	0	.017	.011	mg/kg	64.7	
SPI02	0950393	A314368	DIELDRIN	0	.033	.024	mg/kg	72.7	
SPI02	0950393	A314368	ENDRIN	0	.033	.024	mg/kg	72.7	
SPI02	0950393	A314368	4,4'-DDT	0	.033	.026	mg/kg	78.8	
DPS02	0950394	A314368	GAMMA-BHC (LINDANE)	0	.017	.01	mg/kg	58.8	1
DPS02	0950394	A314368	HEPTACHLOR	0	.017	.013	mg/kg	76.5	8
DPS02	0950394	A314368	ALDRIN	0	.017	.012	mg/kg	70.6	8.7
DPS02	0950394	A314368	DIELDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	0950394	A314368	ENDRIN	0	.033	.025	mg/kg	75.8	4.2
DPS02	0950394	A314368	4,4'-DDT	0	.033	.027	mg/kg	81.8	3.7
BLA02	0962587		See Attached Report g7071f.ind						
SAMPLE	A314585		See Certificate of Analysis						
LCS	0950392		GAMMA-BHC (LINDANE)	.017		.012	mg/kg	70.6	
LCS	0950392		HEPTACHLOR	.017		.014	mg/kg	82.4	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	0950392		ALDRIN	.017		.014	mg/kg	82.4	
LCS	0950392		DIELDRIN	.033		.028	mg/kg	84.8	
LCS	0950392		ENDRIN	.033		.029	mg/kg	87.9	
LCS	0950392		4,4'-DDT	.033		.031	mg/kg	93.9	

Notes

< *Less Than Lower Detection Limit*
BDL *Below Detection Limit*

Quality Assurance Officer: D. Hemmerlein

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320790
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 12:00

Sample Description

SAMPLE I.D.: SW-083094-KJJ-111
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	Q999803		CYANIDE			-.001	mg/L		
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	Q970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	Q970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	Q970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320790		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SPI01	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SPI02	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SPI01	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SPI02	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.396	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100626	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100626	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SPI01	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SPI02	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SPI02	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SPI02	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	0991552	A320793	SELENIUM	0		BDL	mg/L		
SPI02	0991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	0999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	0999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	0999697	NA	SELENIUM			< 0.002	mg/L		
LCS	0991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	0991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	0999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	0999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	0999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	0991552	A320793	THALLIUM	0		BDL	mg/L		
SPI02	0991550	A320793	THALLIUM	0	3.00	3.04	mg/L	101	
CDL01	0999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	0999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	0999697	NA	THALLIUM			< 0.004	mg/L		
LCS	0991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	0991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	0999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	0999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	0999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229263

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	0997748	A320790	MERCURY	0		BDL	mg/L		
SPI02	0997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	0100980		MERCURY	.0002		.000166	mg/L	83	
CCV	0101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	0101469		MERCURY			< .0002	mg/L		
LCS	0997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	0997745		MERCURY			< .0002	mg/L		
SAMPLE	A320790		See Certificate of Analysis						
CCV	0101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	0101475		MERCURY			< .0002	mg/L		
CDL01	0101486		MERCURY	.0002		.000136	mg/L	68	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.D

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >0844B Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
SP102	0993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74
SP102	0993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6
SP102	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8
SP102	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5
SP102	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8
SP102	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9
SP102	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4
SP102	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1
SP102	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5
SP102	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2
SP102	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5
SP102	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82
SP102	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2
SP102	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6
SP102	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5
SP102	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7
SP102	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1
SP102	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9
SP102	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9
SP102	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7
SP102	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3
SP102	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6
SP102	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7
SP102	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8
SP102	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3
SP102	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1
SP102	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103
SP102	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4
SP102	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9
SP102	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8
SP102	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6
SP102	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5
SP102	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9
SP102	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9
SP102	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1
SP102	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9
SP102	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6
SP102	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74
SP102	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88
SP102	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4
SP102	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2
SP102	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2
SP102	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5
SP102	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6
SP102	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80
SP102	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5
SP102	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SPI02	Q993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SPI02	Q993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SPI02	Q993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SPI02	Q993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SPI02	Q993144	A320257	PHENOL	0	100	57	ug/L	57	
SPI02	Q993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SPI02	Q993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	Q993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	Q993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	Q993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	Q993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	Q993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	Q993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	Q993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	Q993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	Q993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	Q993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	Q993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	Q993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	Q993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	Q993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	Q993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	Q993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	Q993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	Q993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.9
DPS02	Q993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	Q993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	Q993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	Q993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	Q993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	Q993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	Q993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	Q993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	Q993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	Q993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	Q993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	Q993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	Q993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	Q993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	Q993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.
DPS02	Q993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	Q993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	Q993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.
DPS02	Q993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	Q993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	Q993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	Q993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	Q993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	Q993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	Q993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	Q993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	Q993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	Q993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	Q993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	Q993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	Q993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M	0	100	86.7	ug/L	86.7	6.1

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	6.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	5.9
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320790		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.7
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320790

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	Q997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	Q997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	Q997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	Q997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	Q997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320790		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: HLBuach

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320792
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 08:50

Sample Description

SAMPLE I.D.: SW-083094-KJJ-106
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	0999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	0999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	0999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	0999803		CYANIDE			-.001	mg/L		
CDL01	0999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	0999806		CYANIDE			0	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	0999809		CYANIDE	.1		.101	mg/L	101	
BLA01	0999810		CYANIDE			0	mg/L		
LFB02	0999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	0970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	0970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	0970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	0970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320792		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SPI01	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SPI02	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SPI01	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SPI02	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SPI01	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SPI02	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SPI02	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SPI02	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	Q991552	A320793	SELENIUM	0		BDL	mg/L		
SP102	Q991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	Q999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	Q999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	SELENIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	Q991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	Q999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	Q991552	A320793	THALLIUM	0		BDL	mg/L		
SP102	Q991550	A320793	THALLIUM	0	3.00	3.04	mg/L	101	
CDL01	Q999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	Q999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	Q999697	NA	THALLIUM			< 0.004	mg/L		
LCS	Q991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	Q991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	Q999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997748	A320790	MERCURY	0		BDL	mg/L		
SP102	Q997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	Q101469		MERCURY			< .0002	mg/L		
LCS	Q997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	Q997745		MERCURY			< .0002	mg/L		
SAMPLE	A320792		See Certificate of Analysis						
CCV	Q101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	Q101475		MERCURY			< .0002	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >0845B Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
SPIO2	0993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8
SPIO2	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5
SPIO2	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8
SPIO2	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9
SPIO2	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4
SPIO2	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1
SPIO2	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5
SPIO2	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5
SPIO2	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82
SPIO2	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2
SPIO2	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6
SPIO2	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5
SPIO2	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7
SPIO2	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1
SPIO2	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9
SPIO2	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9
SPIO2	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7
SPIO2	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3
SPIO2	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6
SPIO2	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7
SPIO2	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8
SPIO2	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3
SPIO2	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1
SPIO2	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103
SPIO2	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4
SPIO2	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9
SPIO2	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8
SPIO2	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6
SPIO2	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5
SPIO2	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9
SPIO2	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9
SPIO2	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1
SPIO2	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7
SPIO2	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9
SPIO2	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6
SPIO2	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74
SPIO2	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88
SPIO2	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4
SPIO2	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2
SPIO2	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2
SPIO2	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5
SPIO2	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6
SPIO2	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80
SPIO2	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3
SPIO2	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5
SPIO2	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	0993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SPI02	0993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SPI02	0993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SPI02	0993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SPI02	0993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SPI02	0993144	A320257	PHENOL	0	100	57	ug/L	57	
SPI02	0993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SPI02	0993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	0993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	0993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	0993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	0993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	0993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	0993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	0993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	0993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	0993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	0993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	0993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	0993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	0993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	0993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	0993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	0993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	0993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	0993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.9
DPS02	0993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	0993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	0993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	0993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	0993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	0993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	0993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	0993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	0993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	0993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	0993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	0993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	0993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	0993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	0993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.2
DPS02	0993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	0993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	0993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.2
DPS02	0993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	0993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	0993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	0993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	0993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	0993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	0993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	0993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	0993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	0993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	0993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	0993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	0993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	86.7	ug/L	86.7	6.1

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	6.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	[illegible]
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	[illegible]9
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320792		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: Q305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.7
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	0997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	0997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	0997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	0997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	0997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	0997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	0997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	0997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	0997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320792		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: HWBusch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	31-AUG-94	A320793
	Complete	PO Number
	23-SEP-94	5369-50
	Printed	Sampled
	26-SEP-94	30-AUG-94 11:15

Sample Description

SAMPLE I.D.: SW-083094-KJJ-110
PROJECT: FOUR COUNTY LANDFILL

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.0
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	Q999803		CYANIDE			-.001	mg/L		
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 14-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 15-SEP-94 File ID: Run: R229954

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q105094	PERKIN ELM	ALUMINUM	2.00		1.98	mg/L	99	
SPI01	Q105264	A321929	ALUMINUM	0	2.00	2.19	mg/L	110	
DUP01	Q105275	A321929	ALUMINUM	0		BDL	mg/L		
DUP02	Q970006	A320793	ALUMINUM	5.80		5.43	mg/L		7
SPI02	Q970004	A320793	ALUMINUM	5.80	2.00	8.10	mg/L	115	
CDL01	Q105091	INORGANIC	ALUMINUM	10		9.93	mg/L	99	
ICS-A	Q105136	PERKIN ELM	ALUMINUM	500		480.	mg/L	96	
CCV	Q105229	INORGANIC	ALUMINUM	5.00		5.05	mg/L	101	
BLA01	Q105228	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q970002	SPEX	ALUMINUM	20.0		17.2	mg/L	86	
BLA02	Q970003	NA	ALUMINUM			< 0.02	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q105195	INORGANIC	ALUMINUM	5.00		5.07	mg/L	101	
BLA01	Q105194	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q105177	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	

ANTIMONY ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q100602	PERKIN ELM	ANTIMONY	0.400		0.363	mg/L	91
DUP01	Q100618	A321502	ANTIMONY	0		BDL	mg/L	
DUP02	Q991552	A320793	ANTIMONY	0		BDL	mg/L	
SPI02	Q991550	A320793	ANTIMONY	0	0.500	0.453	mg/L	91
CDL01	Q100597	PERKIN ELM	ANTIMONY	0.120		0.0823	mg/L	69
CCV	Q100632	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100631	NA	ANTIMONY			< 0.012	mg/L	
LCS	Q991548	SPEX	ANTIMONY	5.00		4.43	mg/L	89
BLA02	Q991549	NA	ANTIMONY			< 0.012	mg/L	
SAMPLE	A320793		See Certificate of Analysis					
CCV	Q100630	INORGANIC	ANTIMONY	1.00		1.00	mg/L	100
BLA01	Q100629	NA	ANTIMONY			< 0.012	mg/L	
CDL01	Q100624	PERKIN ELM	ANTIMONY	0.120		0.0896	mg/L	75

BARIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	BARIUM	2.00		2.04	mg/L	102	
DUP01	Q100618	A321502	BARIUM	0.0717		0.0705	mg/L		2
SPI01	Q100617	A321502	BARIUM	0.0717	2.00	2.32	mg/L	112	
DUP02	Q991552	A320793	BARIUM	0.0398		0.0341	mg/L		15
SPI02	Q991550	A320793	BARIUM	0.0398	2.00	1.99	mg/L	98	
CDL01	Q100596	INORGANIC	BARIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BARIUM	0.500		0.503	mg/L	101	
CCV	Q100632	INORGANIC	BARIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	BARIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	BARIUM	20.0		17.6	mg/L	88	
BLA02	Q991549	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BARIUM	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	BARIUM	0.500		0.498	mg/L	100	

BERYLLIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	BERYLLIUM	0.400		0.389	mg/L	97	
DUP01	Q100618	A321502	BERYLLIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	BERYLLIUM	0	0.050	0.0549	mg/L	110	
DUP02	Q991552	A320793	BERYLLIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	BERYLLIUM	0	0.050	0.0484	mg/L	97	
CDL01	Q100596	INORGANIC	BERYLLIUM	10		9.98	mg/L	100	
ICS-A	Q100595	PERKIN ELM	BERYLLIUM	0.500		0.483	mg/L	97	
CCV	Q100632	INORGANIC	BERYLLIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q991548	SPEX	BERYLLIUM	0.500		0.434	mg/L	87	
BLA02	Q991549	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	BERYLLIUM	5.00		4.93	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	BERYLLIUM	0.010		0.00819	mg/L	82	
ICS-A	Q100623	PERKIN ELM	BERYLLIUM	0.500		0.482	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CADMIUM	0.400		0.400	mg/L	100	
DUP01	Q100618	A321502	CADMIUM	0.00711		0.00684	mg/L		4
SPI01	Q100617	A321502	CADMIUM	0.00711	0.050	0.0581	mg/L	102	
DUP02	Q991552	A320793	CADMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CADMIUM	0	0.050	0.0489	mg/L	98	
CDL01	Q100596	INORGANIC	CADMIUM	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	CADMIUM	1.00		0.938	mg/L	94	
CCV	Q100632	INORGANIC	CADMIUM	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	CADMIUM			< 0.002	mg/L		
LCS	Q991553	INORGANIC	CADMIUM	.5		0.487	mg/L	97	
BLA02	Q991554	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CADMIUM	5.00		4.95	mg/L	99	
BLA01	Q100629	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100624	PERKIN ELM	CADMIUM	0.010		0.0106	mg/L	106	
ICS-A	Q100623	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	

CALCIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	CALCIUM	100		97.5	mg/L	98	
DUP01	Q100618	A321502	CALCIUM	110.		109.	mg/L		1
SPI01	Q100617	A321502	CALCIUM	110.	100	203.	mg/L	93	
DUP02	Q991552	A320793	CALCIUM	47.6		46.8	mg/L		2
SPI02	Q991550	A320793	CALCIUM	47.6	100	134.	mg/L	86	
ICS-A	Q100595	PERKIN ELM	CALCIUM	500		462.	mg/L	92	
CCV	Q100632	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100631	NA	CALCIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	CALCIUM	100		85.6	mg/L	86	
BLA02	Q991549	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CALCIUM	50.0		49.3	mg/L	99	
BLA01	Q100629	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100623	PERKIN ELM	CALCIUM	500		464.	mg/L	93	

CHROMIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	CHROMIUM	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	CHROMIUM	0.0358		0.0312	mg/L		14
SPI01	Q100617	A321502	CHROMIUM	0.0358	0.200	0.253	mg/L	109	
DUP02	Q991552	A320793	CHROMIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	CHROMIUM	0	0.200	0.203	mg/L	102	
CDL01	Q100596	INORGANIC	CHROMIUM	10		10.1	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100595	PERKIN ELM	CHROMIUM	0.500		0.489	mg/L	98	
CCV	Q100632	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100631	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	CHROMIUM	2.00		1.77	mg/L	89	
BLA02	Q991549	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	CHROMIUM	5.00		5.03	mg/L	101	
BLA01	Q100629	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	CHROMIUM	0.020		0.0174	mg/L	87	
ICS-A	Q100623	PERKIN ELM	CHROMIUM	0.500		0.493	mg/L	99	

COBALT ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COBALT	0.400		0.402	mg/L	101	
DUP01	Q100618	A321502	COBALT	0		BDL	mg/L		
SP101	Q100617	A321502	COBALT	0	0.500	0.557	mg/L	111	
DUP02	Q991552	A320793	COBALT	0		BDL	mg/L		
SP102	Q991550	A320793	COBALT	0	0.500	0.490	mg/L	98	
CDL01	Q100596	INORGANIC	COBALT	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	
CCV	Q100632	INORGANIC	COBALT	5.00		5.00	mg/L	100	
BLA01	Q100631	NA	COBALT			< 0.004	mg/L		
LCS	Q991548	SPEX	COBALT	5.00		4.36	mg/L	87	
BLA02	Q991549	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COBALT	5.00		4.96	mg/L	99	
BLA01	Q100629	NA	COBALT			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	COBALT	0.100		0.0929	mg/L	93	
ICS-A	Q100623	PERKIN ELM	COBALT	0.500		0.470	mg/L	94	

COPPER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	COPPER	0.400		0.391	mg/L	98	
DUP01	Q100618	A321502	COPPER	0		BDL	mg/L		
SP101	Q100617	A321502	COPPER	0	0.250	0.284	mg/L	114	
DUP02	Q991552	A320793	COPPER	0		BDL	mg/L		
SP102	Q991550	A320793	COPPER	0	0.250	0.244	mg/L	98	
CDL01	Q100596	INORGANIC	COPPER	10		9.93	mg/L	99	
ICS-A	Q100595	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100632	INORGANIC	COPPER	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	COPPER			< 0.008	mg/L		
LCS	Q991548	SPEX	COPPER	2.50		2.15	mg/L	86	
BLA02	Q991549	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	COPPER	5.00		4.94	mg/L	99	
BLA01	Q100629	NA	COPPER			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	COPPER	0.050		0.0502	mg/L	100	
ICS-A	Q100623	PERKIN ELM	COPPER	0.500		0.429	mg/L	86	

IRON ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	IRON	0.400		0.404	mg/L	101	
DUP01	Q100618	A321502	IRON	0		BDL	mg/L		
SPI01	Q100617	A321502	IRON	0	1.00	1.13	mg/L	113	
DUP02	Q991552	A320793	IRON	4.33		4.04	mg/L		7
CDL01	Q100596	INORGANIC	IRON	10		9.94	mg/L	99	
ICS-A	Q100595	PERKIN ELM	IRON	200		183.	mg/L	92	
CCV	Q100632	INORGANIC	IRON	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	IRON			< 0.01	mg/L		
LCS	Q991548	SPEX	IRON	10.0		8.83	mg/L	88	
BLA02	Q991549	NA	IRON			.0393	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	IRON	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	IRON			< 0.01	mg/L		
ICS-A	Q100623	PERKIN ELM	IRON	200		184.	mg/L	92	

MAGNESIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100599	SPEX	MAGNESIUM	100		99.2	mg/L	99	
DUP01	Q100618	A321502	MAGNESIUM	26.7		26.6	mg/L		0
SPI01	Q100617	A321502	MAGNESIUM	26.7	100	131.	mg/L	104	
DUP02	Q991552	A320793	MAGNESIUM	12.8		12.5	mg/L		2
SPI02	Q991550	A320793	MAGNESIUM	12.8	100	103.	mg/L	90	
ICS-A	Q100595	PERKIN ELM	MAGNESIUM	500		481.	mg/L	96	
CCV	Q100632	INORGANIC	MAGNESIUM	50.0		50.5	mg/L	101	
BLA01	Q100631	NA	MAGNESIUM			.328	mg/L		
LCS	Q991548	SPEX	MAGNESIUM	100		86.7	mg/L	87	
BLA02	Q991549	NA	MAGNESIUM			.312	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MAGNESIUM	50.0		50.1	mg/L	100	
BLA01	Q100629	NA	MAGNESIUM			.307	mg/L		
ICS-A	Q100623	PERKIN ELM	MAGNESIUM	500		483.	mg/L	97	

MANGANESE ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	MANGANESE	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	MANGANESE	0.0460		0.0455	mg/L		1
SPI01	Q100617	A321502	MANGANESE	0.0460	0.500	0.592	mg/L	109	
DUP02	Q991552	A320793	MANGANESE	0.0608		0.0585	mg/L		4
SPI02	Q991550	A320793	MANGANESE	0.0608	0.500	0.539	mg/L	96	
CDL01	Q100596	INORGANIC	MANGANESE	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	MANGANESE	0.500		0.494	mg/L	99	
CCV	Q100632	INORGANIC	MANGANESE	5.00		4.99	mg/L	100	
BLA01	Q100631	NA	MANGANESE			< 0.004	mg/L		
LCS	Q991548	SPEX	MANGANESE	5.00		4.32	mg/L	86	
BLA02	Q991549	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	MANGANESE	5.00		4.95	mg/L	99	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA01	Q100629	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	MANGANESE	0.030		0.0291	mg/L	97	
ICS-A	Q100623	PERKIN ELM	MANGANESE	0.500		0.496	mg/L	99	

NICKEL ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	NICKEL	0.400		0.401	mg/L	100	
DUP01	Q100618	A321502	NICKEL	0.0335		0.0294	mg/L		13
SPI01	Q100617	A321502	NICKEL	0.0335	0.500	0.575	mg/L	108	
DUP02	Q991552	A320793	NICKEL	0		BDL	mg/L		
SPI02	Q991550	A320793	NICKEL	0	0.500	0.487	mg/L	97	
CDL01	Q100596	INORGANIC	NICKEL	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	NICKEL	1.00		0.918	mg/L	92	
CCV	Q100632	INORGANIC	NICKEL	5.00		4.98	mg/L	100	
BLA01	Q100631	NA	NICKEL			< 0.004	mg/L		
LCS	Q991548	SPEX	NICKEL	5.00		4.34	mg/L	87	
BLA02	Q991549	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	NICKEL	5.00		4.93	mg/L	99	
BLA01	Q100629	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	NICKEL	0.080		0.0757	mg/L	95	
ICS-A	Q100623	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	

POTASSIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M126.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	POTASSIUM	20.0		20.0	mg/L	100	
ICV01	Q100599	SPEX	POTASSIUM	100		100.	mg/L	100	
DUP01	Q100618	A321502	POTASSIUM	17.8		17.7	mg/L		1
SPI01	Q100617	A321502	POTASSIUM	17.8	100	121.	mg/L	103	
DUP02	Q991552	A320793	POTASSIUM	5.84		5.31	mg/L		10
SPI02	Q991550	A320793	POTASSIUM	5.84	100	95.0	mg/L	89	
CCV	Q100632	INORGANIC	POTASSIUM	50.0		48.7	mg/L	97	
BLA01	Q100631	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	POTASSIUM	100		84.8	mg/L	85	
BLA02	Q991549	NA	POTASSIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q100629	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP01	Q100618	A321502	SILVER	0		BDL	mg/L		
SPI01	Q100617	A321502	SILVER	0	0.050	0.0542	mg/L	108	
DUP02	Q991552	A320793	SILVER	0		BDL	mg/L		
SPI02	Q991550	A320793	SILVER	0	0.050	0.0506	mg/L	101	
CDL01	Q100596	INORGANIC	SILVER	2		2.00	mg/L	100	
ICS-A	Q100595	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q100632	INORGANIC	SILVER	1.00		0.990	mg/L	99	
BLA01	Q100631	NA	SILVER			< 0.004	mg/L		
LCS	Q991548	SPEX	SILVER	0.500		0.406	mg/L	81	
BLA02	Q991549	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SILVER	1.00		0.987	mg/L	99	
BLA01	Q100629	NA	SILVER			< 0.004	mg/L		
ICS-A	Q100623	PERKIN ELM	SILVER	1.00		0.989	mg/L	99	

SODIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100600	PERKIN ELM	SODIUM	2		2.01	mg/L	101	
ICV01	Q100599	SPEX	SODIUM	100		102.	mg/L	102	
DUP01	Q100618	A321502	SODIUM	52.4		52.1	mg/L		1
SPI01	Q100617	A321502	SODIUM	52.4	100	158.	mg/L	106	
DUP02	Q991552	A320793	SODIUM	6.83		6.67	mg/L		2
SPI02	Q991550	A320793	SODIUM	6.83	100	99.1	mg/L	92	
CCV	Q100632	INORGANIC	SODIUM	50		50.3	mg/L	101	
BLA01	Q100631	NA	SODIUM			< 0.08	mg/L		
LCS	Q991548	SPEX	SODIUM	100		88.4	mg/L	88	
BLA02	Q991549	NA	SODIUM			< 0.08	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	SODIUM	50		50.1	mg/L	100	
BLA01	Q100629	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0

Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100602	PERKIN ELM	VANADIUM	0.400		0.394	mg/L	99	
DUP01	Q100618	A321502	VANADIUM	0		BDL	mg/L		
SPI01	Q100617	A321502	VANADIUM	0	0.500	0.549	mg/L	110	
DUP02	Q991552	A320793	VANADIUM	0		BDL	mg/L		
SPI02	Q991550	A320793	VANADIUM	0	0.500	0.486	mg/L	97	
CDL01	Q100596	INORGANIC	VANADIUM	10		9.97	mg/L	100	
ICS-A	Q100595	PERKIN ELM	VANADIUM	0.500		0.471	mg/L	94	
CCV	Q100632	INORGANIC	VANADIUM	5.00		4.97	mg/L	99	
BLA01	Q100631	NA	VANADIUM			< 0.004	mg/L		
LCS	Q991548	SPEX	VANADIUM	5.00		4.30	mg/L	86	
BLA02	Q991549	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	VANADIUM	5.00		4.92	mg/L	98	
BLA01	Q100629	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100624	PERKIN ELM	VANADIUM	0.100		0.0907	mg/L	91	
ICS-A	Q100623	PERKIN ELM	VANADIUM	0.500		0.468	mg/L	94	

ZINC ICP SW846-6010A

Analyst : M. JAO Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229183

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100602	PERKIN ELM	ZINC	0.400		0.390	mg/L	98	
DUP01	Q100618	A321502	ZINC	0.0450		0.0430	mg/L		5
SPI01	Q100617	A321502	ZINC	0.0450	0.500	0.609	mg/L	113	
DUP02	Q991552	A320793	ZINC	0.0313		0.0367	mg/L		16
SPI02	Q991550	A320793	ZINC	0.0313	0.500	0.525	mg/L	99	
CDL01	Q100596	INORGANIC	ZINC	10		10.0	mg/L	100	
ICS-A	Q100595	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100632	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100631	NA	ZINC			< 0.008	mg/L		
LCS	Q991548	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q991549	NA	ZINC			< 0.008	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q100630	INORGANIC	ZINC	5.00		5.01	mg/L	100	
BLA01	Q100629	NA	ZINC			< 0.008	mg/L		
CDL01	Q100624	PERKIN ELM	ZINC	0.040		0.0451	mg/L	113	
ICS-A	Q100623	PERKIN ELM	ZINC	1.00		1.02	mg/L	102	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999692	PERKIN-ELM	ARSENIC	.04		0.0399	mg/L	100	
DUP02	Q991552	A320793	ARSENIC	0		BDL	mg/L		
SPI02	Q991550	A320793	ARSENIC	0	2	1.93	mg/L	97	
CDL01	Q999709	INORGANIC	ARSENIC	.5		0.494	mg/L	99	
CCV	Q999696	INORGANIC	ARSENIC	.1		0.102	mg/L	102	
BLA01	Q999697	NA	ARSENIC			< 0.002	mg/L		
LCS	Q991553	INORGANIC	ARSENIC	.5		0.497	mg/L	99	
BLA02	Q991554	NA	ARSENIC			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q999705	INORGANIC	ARSENIC	.1		0.0979	mg/L	98	
BLA01	Q999706	NA	ARSENIC			< 0.002	mg/L		
CDL01	Q999700	PERKIN-ELM	ARSENIC	.02		0.0200	mg/L	100	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 12-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: S. O'NEAL Review Date: 13-SEP-94 File ID: Run: R229682

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103572	PERKIN-ELM	LEAD	.04		0.0398	mg/L	100	
DUP02	Q970006	A320793	LEAD	0		BDL	mg/L		
SPI02	Q970004	A320793	LEAD	0	0.500	0.537	mg/L	107	
CDL01	Q103570	INORGANIC	LEAD	.5		0.490	mg/L	98	
ICS-A	Q103568	PERKIN ELM	LEAD	1		0.925	mg/L	93	
CCV	Q103567	INORGANIC	LEAD	.1		0.103	mg/L	103	
BLA01	Q103566	NA	LEAD			< 0.002	mg/L		
LCS	Q970007	INORGANIC	LEAD	.5		0.515	mg/L	103	
BLA02	Q970008	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	Q103564	INORGANIC	LEAD	.1		0.102	mg/L	102	
BLA01	Q103565	NA	LEAD			< 0.002	mg/L		
CDL01	Q103563	PERKIN-ELM	LEAD	.006		0.00717	mg/L	120	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	0103561	PERKIN ELM	LEAD	1		0.937	mg/L	94	

SELENIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999692	PERKIN-ELM	SELENIUM	.04		0.0423	mg/L	106	
DUP02	0991552	A320793	SELENIUM	0		BDL	mg/L		
SPI02	0991550	A320793	SELENIUM	0	2	2.05	mg/L	103	
CDL01	0999709	INORGANIC	SELENIUM	.5		0.493	mg/L	99	
CCV	0999696	INORGANIC	SELENIUM	.1		0.100	mg/L	100	
BLA01	0999697	NA	SELENIUM			< 0.002	mg/L		
LCS	0991553	INORGANIC	SELENIUM	.5		0.484	mg/L	97	
BLA02	0991554	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	0999705	INORGANIC	SELENIUM	.1		0.0972	mg/L	97	
BLA01	0999706	NA	SELENIUM			< 0.002	mg/L		
CDL01	0999700	PERKIN-ELM	SELENIUM	.01		0.0113	mg/L	113	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. WALLACE Analysis Date: 02-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: S. O'NEAL Review Date: 07-SEP-94 File ID: Run: R229035

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999692	PERKIN-ELM	THALLIUM	.04		0.0429	mg/L	107	
DUP02	0991552	A320793	THALLIUM	0		BDL	mg/L		
SPI02	0991550	A320793	THALLIUM	0	3.00	3.04	mg/L	101	
CDL01	0999709	INORGANIC	THALLIUM	.5		0.503	mg/L	101	
CCV	0999696	INORGANIC	THALLIUM	.1		0.100	mg/L	100	
BLA01	0999697	NA	THALLIUM			< 0.004	mg/L		
LCS	0991553	INORGANIC	THALLIUM	.5		0.496	mg/L	99	
BLA02	0991554	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	0999705	INORGANIC	THALLIUM	.1		0.0989	mg/L	99	
BLA01	0999706	NA	THALLIUM			< 0.004	mg/L		
CDL01	0999700	PERKIN-ELM	THALLIUM	.02		0.0241	mg/L	121	

MERCURY CVAA SW846-7470

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.1.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	0997748	A320790	MERCURY	0		BDL	mg/L		
SPI02	0997746	A320790	MERCURY	0	.001	.000839	mg/L	83.9	
CDL01	0100980		MERCURY	.0002		.000166	mg/L	83	
CCV	0101468		MERCURY	.003		.00304	mg/L	101.3	
BLA01	0101469		MERCURY			< .0002	mg/L		
LCS	0997743		MERCURY	.003		.00289	mg/L	96.3	
BLA02	0997745		MERCURY			< .0002	mg/L		
SAMPLE	A320793		See Certificate of Analysis						
CCV	0101474		MERCURY	.003		.00268	mg/L	89.3	
BLA01	0101475		MERCURY			< .0002	mg/L		
CDL01	0101486		MERCURY	.0002		.000136	mg/L	68	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 07-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 09-SEP-94 File ID: >0846B Run: R229417

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
SP102	0993144	A320257	ACENAPHTHENE	0	100	74	ug/L	74
SP102	0993144	A320257	ACENAPHTHYLENE	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	ANTHRACENE	0	100	72.6	ug/L	72.6
SP102	0993144	A320257	BENZO(A)PYRENE	0	100	90.8	ug/L	90.8
SP102	0993144	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	96.5	ug/L	96.5
SP102	0993144	A320257	BENZO(K)FLUORANTHENE	0	100	93.8	ug/L	93.8
SP102	0993144	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	76.9	ug/L	76.9
SP102	0993144	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	72.4	ug/L	72.4
SP102	0993144	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	92.1	ug/L	92.1
SP102	0993144	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.5	ug/L	83.5
SP102	0993144	A320257	4-BROMODIPHENYL ETHER	0	100	79.2	ug/L	79.2
SP102	0993144	A320257	CARBAZOLE	0	100	91.5	ug/L	91.5
SP102	0993144	A320257	4-CHLOROANILINE	0	100	82	ug/L	82
SP102	0993144	A320257	2-CHLORONAPHTHALENE	0	100	73.2	ug/L	73.2
SP102	0993144	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	70.6	ug/L	70.6
SP102	0993144	A320257	CHRYSENE	0	100	90.5	ug/L	90.5
SP102	0993144	A320257	DIBENZ(A,H)ANTHRACENE	0	100	82.7	ug/L	82.7
SP102	0993144	A320257	DIBENZOFURAN	0	100	75.1	ug/L	75.1
SP102	0993144	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	66.9	ug/L	66.9
SP102	0993144	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	73.9	ug/L	73.9
SP102	0993144	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	72.7	ug/L	72.7
SP102	0993144	A320257	3,3'-DICHLOROBENZIDINE	0	100	94.3	ug/L	94.3
SP102	0993144	A320257	DIETHYLPHTHALATE	0	100	77.6	ug/L	77.6
SP102	0993144	A320257	DIMETHYLPHTHALATE	0	100	85.7	ug/L	85.7
SP102	0993144	A320257	DI-N-BUTYLPHTHALATE	0	100	65.8	ug/L	65.8
SP102	0993144	A320257	2,4-DINITROTOLUENE	0	100	79.3	ug/L	79.3
SP102	0993144	A320257	2,6-DINITROTOLUENE	0	100	82.1	ug/L	82.1
SP102	0993144	A320257	DI-N-OCTYLPHTHALATE	0	100	103	ug/L	103
SP102	0993144	A320257	FLUORANTHENE	0	100	73.4	ug/L	73.4
SP102	0993144	A320257	FLUORENE	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	HEXACHLOROBENZENE	0	100	80.9	ug/L	80.9
SP102	0993144	A320257	HEXACHLOROBUTADIENE	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8
SP102	0993144	A320257	HEXACHLOROETHANE	0	100	72.6	ug/L	72.6
SP102	0993144	A320257	INDENO(1,2,3-CD)PYRENE	0	100	77.5	ug/L	77.5
SP102	0993144	A320257	ISOPHORONE	0	100	81.9	ug/L	81.9
SP102	0993144	A320257	2-METHYLNAPHTHALENE	0	100	75.9	ug/L	75.9
SP102	0993144	A320257	NAPHTHALENE	0	100	73.1	ug/L	73.1
SP102	0993144	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	75.7	ug/L	75.7
SP102	0993144	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	87.9	ug/L	87.9
SP102	0993144	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	94.6	ug/L	94.6
SP102	0993144	A320257	NITROBENZENE	0	100	74	ug/L	74
SP102	0993144	A320257	N-NITROSODIPHENYLAMINE	0	100	88	ug/L	88
SP102	0993144	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	75.4	ug/L	75.4
SP102	0993144	A320257	PHENANTHRENE	0	100	79.2	ug/L	79.2
SP102	0993144	A320257	PYRENE	0	100	81.2	ug/L	81.2
SP102	0993144	A320257	1,2,4-TRICHLOROBENZENE	0	100	75.5	ug/L	75.5
SP102	0993144	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	81.6	ug/L	81.6
SP102	0993144	A320257	2-CHLOROPHENOL	0	100	80	ug/L	80
SP102	0993144	A320257	2,4-DICHLOROPHENOL	0	100	72.3	ug/L	72.3
SP102	0993144	A320257	2,4-DIMETHYLPHENOL	0	100	63.5	ug/L	63.5
SP102	0993144	A320257	2,4-DINITROPHENOL	0	100	68.6	ug/L	68.6

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q993144	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	78.5	ug/L	78.5	
SPI02	Q993144	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	72.5	ug/L	72.5	
SPI02	Q993144	A320257	2-NITROPHENOL	0	100	79.6	ug/L	79.6	
SPI02	Q993144	A320257	4-NITROPHENOL	0	100	40	ug/L	40	
SPI02	Q993144	A320257	PENTACHLOROPHENOL	0	100	60	ug/L	60	
SPI02	Q993144	A320257	PHENOL	0	100	57	ug/L	57	
SPI02	Q993144	A320257	2,4,5-TRICHLOROPHENOL	0	100	77.9	ug/L	77.9	
SPI02	Q993144	A320257	2,4,6-TRICHLOROPHENOL	0	100	78.1	ug/L	78.1	
DPS02	Q993145	A320257	ACENAPHTHENE	0	100	76.8	ug/L	76.8	3.7
DPS02	Q993145	A320257	ACENAPHTHYLENE	0	100	79.6	ug/L	79.6	5
DPS02	Q993145	A320257	ANTHRACENE	0	100	76.2	ug/L	76.2	4.8
DPS02	Q993145	A320257	BENZO(A)PYRENE	0	100	94.4	ug/L	94.4	3.9
DPS02	Q993145	A320257	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	0	100	97.6	ug/L	97.6	1.1
DPS02	Q993145	A320257	BENZO(K)FLUORANTHENE	0	100	91	ug/L	91	3
DPS02	Q993145	A320257	BIS(2-CHLOROETHOXY)METHANE	0	100	87.6	ug/L	87.6	13
DPS02	Q993145	A320257	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	0	100	90	ug/L	90	2.3
DPS02	Q993145	A320257	BIS(2-CHLOROETHYL)ETHER	0	100	83.4	ug/L	83.4	9.7
DPS02	Q993145	A320257	BIS(2-CHLOROISOPROPYL)ETHER	0	100	75.1	ug/L	75.1	3.7
DPS02	Q993145	A320257	BIS(2-ETHYLHEXYL)PHTHALATE	0	100	83.6	ug/L	83.6	.1
DPS02	Q993145	A320257	4-BROMODIPHENYL ETHER	0	100	82.6	ug/L	82.6	4.2
DPS02	Q993145	A320257	CARBAZOLE	0	100	97.6	ug/L	97.6	6.5
DPS02	Q993145	A320257	4-CHLOROANILINE	0	100	86.1	ug/L	86.1	4.9
DPS02	Q993145	A320257	2-CHLORONAPHTHALENE	0	100	79.9	ug/L	79.9	8.8
DPS02	Q993145	A320257	4-CHLOROPHENYL-PHENYLETHER	0	100	72.1	ug/L	72.1	2.1
DPS02	Q993145	A320257	CHRYSENE	0	100	91.9	ug/L	91.9	1.5
DPS02	Q993145	A320257	DIBENZ(A,H)ANTHRACENE	0	100	101	ug/L	101	19.9
DPS02	Q993145	A320257	DIBENZOFURAN	0	100	79.2	ug/L	79.2	5.3
DPS02	Q993145	A320257	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	0	100	71.5	ug/L	71.5	6.6
DPS02	Q993145	A320257	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	0	100	80	ug/L	80	7.9
DPS02	Q993145	A320257	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	100	80.2	ug/L	80.2	9.8
DPS02	Q993145	A320257	3,3'-DICHLOROBENZIDINE	0	100	98.8	ug/L	98.8	4.7
DPS02	Q993145	A320257	DIETHYLPHTHALATE	0	100	79.1	ug/L	79.1	1.9
DPS02	Q993145	A320257	DIMETHYLPHTHALATE	0	100	89.7	ug/L	89.7	4.6
DPS02	Q993145	A320257	DI-N-BUTYLPHTHALATE	0	100	68.2	ug/L	68.2	3.6
DPS02	Q993145	A320257	2,4-DINITROTOLUENE	0	100	84.4	ug/L	84.4	6.2
DPS02	Q993145	A320257	2,6-DINITROTOLUENE	0	100	87.9	ug/L	87.9	6.8
DPS02	Q993145	A320257	DI-N-OCTYLPHTHALATE	0	100	101	ug/L	101	2
DPS02	Q993145	A320257	FLUORANTHENE	0	100	77.7	ug/L	77.7	5.7
DPS02	Q993145	A320257	FLUORENE	0	100	75.3	ug/L	75.3	4.1
DPS02	Q993145	A320257	HEXACHLOROBENZENE	0	100	82.7	ug/L	82.7	2.2
DPS02	Q993145	A320257	HEXACHLOROBUTADIENE	0	100	80.1	ug/L	80.1	10.2
DPS02	Q993145	A320257	HEXACHLOROCYCLOPENTADIENE	0	100	68.8	ug/L	68.8	0
DPS02	Q993145	A320257	HEXACHLOROETHANE	0	100	77.7	ug/L	77.7	6.8
DPS02	Q993145	A320257	INDENO(1,2,3-CD)PYRENE	0	100	94.9	ug/L	94.9	20.2
DPS02	Q993145	A320257	ISOPHORONE	0	100	86.7	ug/L	86.7	5.7
DPS02	Q993145	A320257	2-METHYLNAPHTHALENE	0	100	81.6	ug/L	81.6	7.2
DPS02	Q993145	A320257	NAPHTHALENE	0	100	77.4	ug/L	77.4	5.7
DPS02	Q993145	A320257	2-NITROANILINE (O-NITROANILINE)	0	100	81.8	ug/L	81.8	7.7
DPS02	Q993145	A320257	3-NITROANILINE (M-NITROANILINE)	0	100	91.8	ug/L	91.8	4.3
DPS02	Q993145	A320257	4-NITROANILINE (P-NITROANILINE)	0	100	98.3	ug/L	98.3	3.8
DPS02	Q993145	A320257	NITROBENZENE	0	100	80	ug/L	80	7.8
DPS02	Q993145	A320257	N-NITROSODIPHENYLAMINE	0	100	88.5	ug/L	88.5	.6
DPS02	Q993145	A320257	N-NITROSO-DI-N-PROPYLAMINE	0	100	77.5	ug/L	77.5	2.7
DPS02	Q993145	A320257	PHENANTHRENE	0	100	82	ug/L	82	3.5
DPS02	Q993145	A320257	PYRENE	0	100	81.7	ug/L	81.7	.6
DPS02	Q993145	A320257	1,2,4-TRICHLOROBENZENE	0	100	80.4	ug/L	80.4	6.3
DPS02	Q993145	A320257	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	100	86.7	ug/L	86.7	6.1

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q993145	A320257	2-CHLOROPHENOL	0	100	88.8	ug/L	88.8	10.4
DPS02	Q993145	A320257	2,4-DICHLOROPHENOL	0	100	81	ug/L	81	11.4
DPS02	Q993145	A320257	2,4-DIMETHYLPHENOL	0	100	67.5	ug/L	67.5	6.1
DPS02	Q993145	A320257	2,4-DINITROPHENOL	0	100	85	ug/L	85	
DPS02	Q993145	A320257	2-METHYLPHENOL (O-CRESOL)	0	100	83.3	ug/L	83.3	5.9
DPS02	Q993145	A320257	4-METHYLPHENOL (P-CRESOL)	0	100	77	ug/L	77	6
DPS02	Q993145	A320257	2-NITROPHENOL	0	100	85.3	ug/L	85.3	6.9
DPS02	Q993145	A320257	4-NITROPHENOL	0	100	42.2	ug/L	42.2	5.4
DPS02	Q993145	A320257	PENTACHLOROPHENOL	0	100	63.6	ug/L	63.6	5.8
DPS02	Q993145	A320257	PHENOL	0	100	64.5	ug/L	64.5	12.3
DPS02	Q993145	A320257	2,4,5-TRICHLOROPHENOL	0	100	87.6	ug/L	87.6	11.7
DPS02	Q993145	A320257	2,4,6-TRICHLOROPHENOL	0	100	88.1	ug/L	88.1	12
CCV	Q102075		See Attached Report g0841b.ind						
BLA02	Q102059		See Attached Report g0834b.ind						
SAMPLE	A320793		See Certificate of Analysis						

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : E. WERNZ Analysis Date: 02-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 06-SEP-94 File ID: 5393 Run: R229016

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DPS02	Q997425	A320931	GAMMA-BHC (LINDANE)	0	.001	.0011	mg/L	110	5.6
DPS02	Q997425	A320931	HEPTACHLOR	0	.001	.00117	mg/L	117	6.2
DPS02	Q997425	A320931	ALDRIN	0	.001	.00128	mg/L	128	10.7
DPS02	Q997425	A320931	DIELDRIN	0	.002	.00238	mg/L	119	6.1
DPS02	Q997425	A320931	ENDRIN	0	.002	.00248	mg/L	124	5.8
DPS02	Q997425	A320931	4,4'-DDT	0	.002	.00214	mg/L	107	8.8
SPI02	Q997424	A320931	GAMMA-BHC (LINDANE)	0	.001	.00104	mg/L	104	
SPI02	Q997424	A320931	HEPTACHLOR	0	.001	.0011	mg/L	110	
SPI02	Q997424	A320931	ALDRIN	0	.001	.00115	mg/L	115	
SPI02	Q997424	A320931	DIELDRIN	0	.002	.00224	mg/L	112	
SPI02	Q997424	A320931	ENDRIN	0	.002	.00234	mg/L	117	
SPI02	Q997424	A320931	4,4'-DDT	0	.002	.00196	mg/L	98	
BLA02	Q997422		ALPHA-BHC			< .00002	mg/L		
BLA02	Q997422		BETA-BHC			< .00002	mg/L		
BLA02	Q997422		DELTA-BHC			< .00002	mg/L		
BLA02	Q997422		GAMMA-BHC (LINDANE)			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR			< .00002	mg/L		
BLA02	Q997422		ALDRIN			< .00002	mg/L		
BLA02	Q997422		HEPTACHLOR EPOXIDE			< .00002	mg/L		
BLA02	Q997422		ENDOSULFAN I			< .00002	mg/L		
BLA02	Q997422		DIELDRIN			< .00004	mg/L		
BLA02	Q997422		4,4'-DDE			< .00004	mg/L		
BLA02	Q997422		ENDRIN			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN II			< .00004	mg/L		
BLA02	Q997422		4,4'-DDD			< .00004	mg/L		
BLA02	Q997422		ENDOSULFAN SULFATE			< .00004	mg/L		
BLA02	Q997422		4,4'-DDT			< .00004	mg/L		
BLA02	Q997422		METHOXYCHLOR			< .0002	mg/L		
BLA02	Q997422		ENDRIN KETONE			< .00004	mg/L		
BLA02	Q997422		ALPHA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		GAMMA-CHLORDANE			< .0002	mg/L		
BLA02	Q997422		TOXAPHENE			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1016			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1221			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1232			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1242			< .0002	mg/L		

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320793

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q997422		PCB AROCHLOR 1248			< .0002	mg/L		
BLA02	Q997422		PCB AROCHLOR 1254			< .0004	mg/L		
BLA02	Q997422		PCB AROCHLOR 1260			< .0004	mg/L		
LCS	Q997423		GAMMA-BHC (LINDANE)	.0005		.000393	mg/L	78.6	
LCS	Q997423		HEPTACHLOR	.0005		.000382	mg/L	76.4	
LCS	Q997423		ALDRIN	.0005		.000373	mg/L	74.6	
LCS	Q997423		DIELDRIN	.001		.00089	mg/L	89	
LCS	Q997423		ENDRIN	.001		.000898	mg/L	89.8	
LCS	Q997423		4,4'-DDT	.001		.000751	mg/L	75.1	
SAMPLE	A320793		See Certificate of Analysis						

Notes

BDL Below Detection Limit
< Less Than Lower Detection Limit

Quality Assurance Officer: E.A. Busch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320969
	Complete	PO Number
	27-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 09:30

Sample Description

SAMPLE I.D.: D-083094-KJJ-107
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 12-SEP-94 — Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 13-SEP-94 — File ID: 2072-2073 — Run: R229693

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103622		TOTAL ORGANIC CARBON (TOC)	46.2		42.8	mg/L	92.6	
ICV01	Q103635		TOTAL ORGANIC CARBON (TOC)	46.2		45.6	mg/L	98.7	
SPI01	Q103627	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2090	mg/kg	104.5	
DPS01	Q103628	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1
BLA01	Q103620		TOTAL ORGANIC CARBON (TOC)			-.146	mg/L		
CDL01	Q103621		TOTAL ORGANIC CARBON (TOC)	10		9.13	mg/L	91.3	
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q103630		TOTAL ORGANIC CARBON (TOC)	50		50.6	mg/L	101.2	
BLA01	Q103631		TOTAL ORGANIC CARBON (TOC)			-.539	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : B. HAUE — Analysis Date: 02-SEP-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 03-SEP-94 — File ID: 4158-4160 — Run: R228859

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0998489	A320969	SOLIDS	84		79	Percent		6.1
LCS01	0998487		SOLIDS	9.997		9.9976	Grams	100	
SAMPLE	A320969		See Certificate of Analysis						
LCS01	0998490		SOLIDS	8.6872		8.6858	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 06-SEP-94 — Instrument: AUTO-ANALYZER — Test: G101.6.0
Reviewer: F. ANDERSON — Review Date: 07-SEP-94 — File ID: — Run: R229068

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	0999823		CYANIDE	.205		.202	mg/L	98.5	
SPI02	0999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
DUP02	0999807	A320790	CYANIDE	0		BDL	mg/L		
BLA01	0999803		CYANIDE			-.001	mg/L		
CDL01	0999804		CYANIDE	.005		.0038	mg/L	76	
BLA02	0999806		CYANIDE			0	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	0999809		CYANIDE	.1		.101	mg/L	101	
BLA01	0999810		CYANIDE			0	mg/L		
LFB02	0999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100415	PERKIN ELM	ALUMINUM	2.00		1.99	mg/L	100	
DUP02	Q969901	A320969	ALUMINUM	11300		10100	mg/kg		11
CDL01	Q100411	INORGANIC	ALUMINUM	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	
CCV	Q100407	INORGANIC	ALUMINUM	5.00		5.19	mg/L	104	
BLA01	Q100406	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q969897	SPEX	ALUMINUM	20.0		18.0	mg/L	90	
BLA02	Q969898	NA	ALUMINUM			.117	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	Q100386	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q100395	PERKIN ELM	ALUMINUM	500		488.	mg/L	98	

ANTIMONY ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102273	PERKIN ELM	ANTIMONY	0.400		0.385	mg/L	96	
DUP02	Q991343	A320969	ANTIMONY	6.73		5.40	mg/kg		22
SPI02	Q991341	A320969	ANTIMONY	6.73	50	32.7	mg/kg	52	
CDL01	Q102268	PERKIN ELM	ANTIMONY	0.120		0.118	mg/L	98	
CCV	Q102247	INORGANIC	ANTIMONY	1.00		0.997	mg/L	100	
BLA01	Q102246	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q991339	SPEX	ANTIMONY	5.00		4.62	mg/L	92	
BLA02	Q991340	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q102245	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q102244	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q102241	PERKIN ELM	ANTIMONY	0.120		0.122	mg/L	102	

BARIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q969901	A320969	BARIUM	49.7		46.9	mg/kg		6
SPI02	Q969899	A320969	BARIUM	49.7	200	248.	mg/kg	99	
CDL01	Q100411	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BARIUM	0.500		0.504	mg/L	101	
CCV	Q100407	INORGANIC	BARIUM	5.00		5.08	mg/L	102	
BLA01	Q100406	NA	BARIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	BARIUM	20.0		18.2	mg/L	91	
BLA02	Q969898	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	BARIUM	5.00		5.12	mg/L	102	
BLA01	Q100386	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100395	PERKIN ELM	BARIUM	0.500		0.496	mg/L	99	

BERYLLIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	BERYLLIUM	0.400		0.395	mg/L	99	
DUP02	Q969901	A320969	BERYLLIUM	0.663		0.503	mg/kg		27
SPI02	Q969899	A320969	BERYLLIUM	0.663	5.00	5.35	mg/kg	94	
CDL01	Q100411	INORGANIC	BERYLLIUM	10		9.88	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BERYLLIUM	0.500		0.486	mg/L	97	
CCV	Q100407	INORGANIC	BERYLLIUM	5.00		5.05	mg/L	101	
BLA01	Q100406	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q969897	SPEX	BERYLLIUM	0.500		0.447	mg/L	89	
BLA02	Q969898	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	BERYLLIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	BERYLLIUM	0.010		0.00961	mg/L	96	
ICS-A	Q100395	PERKIN ELM	BERYLLIUM	0.500		0.480	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	CADMIUM	0.400		0.412	mg/L	103	
DUP02	Q969901	A320969	CADMIUM	1.28		1.29	mg/kg		1
SPI02	Q969899	A320969	CADMIUM	1.28	5.00	6.13	mg/kg	97	
CDL01	Q100411	INORGANIC	CADMIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	
CCV	Q100407	INORGANIC	CADMIUM	5.00		5.05	mg/L	101	
BLA01	Q100406	NA	CADMIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	CADMIUM	.5		0.474	mg/L	95	
BLA02	Q969903	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	CADMIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	CADMIUM	0.010		0.0124	mg/L	124	
ICS-A	Q100395	PERKIN ELM	CADMIUM	1.00		0.934	mg/L	93	

CALCIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	CALCIUM	100		97.3	mg/L	97	
DUP02	Q969901	A320969	CALCIUM	17100		17400	mg/kg		2
SPI02	Q969899	A320969	CALCIUM	17100	10000	24900	mg/kg	78	
ICS-A	Q100410	PERKIN ELM	CALCIUM	500		460.	mg/L	92	
CCV	Q100407	INORGANIC	CALCIUM	50.0		50.2	mg/L	100	
BLA01	Q100406	NA	CALCIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	CALCIUM	100		87.0	mg/L	87	
BLA02	Q969898	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q100386	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	CALCIUM	500		456.	mg/L	91	

CHROMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	CHROMIUM	0.400		0.405	mg/L	101	
DUP02	Q969901	A320969	CHROMIUM	22.4		22.6	mg/kg		1
SPI02	Q969899	A320969	CHROMIUM	22.4	20.0	41.6	mg/kg	96	
CDL01	Q100411	INORGANIC	CHROMIUM	10		9.93	mg/L	99	
ICS-A	Q100410	PERKIN ELM	CHROMIUM	0.500		0.487	mg/L	97	
CCV	Q100407	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100406	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	CHROMIUM	2.00		1.79	mg/L	90	
BLA02	Q969898	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	CHROMIUM	5.00		5.08	mg/L	102	
BLA01	Q100386	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	CHROMIUM	0.020		0.0180	mg/L	90	
ICS-A	Q100395	PERKIN ELM	CHROMIUM	0.500		0.483	mg/L	97	

COBALT ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COBALT	0.400		0.407	mg/L	102	
DUP02	Q969901	A320969	COBALT	8.92		9.09	mg/kg		2
SPI02	Q969899	A320969	COBALT	8.92	50.0	56.8	mg/kg	96	
CDL01	Q100411	INORGANIC	COBALT	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COBALT	0.500		0.471	mg/L	94	
CCV	Q100407	INORGANIC	COBALT	5.00		5.06	mg/L	101	
BLA01	Q100406	NA	COBALT			< 0.004	mg/L		
LCS	Q969897	SPEX	COBALT	5.00		4.42	mg/L	88	
BLA02	Q969898	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	COBALT	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	COBALT			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	COBALT	0.100		0.0926	mg/L	93	
ICS-A	Q100395	PERKIN ELM	COBALT	0.500		0.465	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COPPER	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	COPPER	16.0		15.8	mg/kg		1
SPI02	Q969899	A320969	COPPER	16.0	25.0	40.9	mg/kg	100	
CDL01	Q100411	INORGANIC	COPPER	10		9.90	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100407	INORGANIC	COPPER	5.00		5.11	mg/L	102	
BLA01	Q100406	NA	COPPER			< 0.008	mg/L		
LCS	Q969897	SPEX	COPPER	2.50		2.25	mg/L	90	
BLA02	Q969898	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	COPPER	5.00		5.15	mg/L	103	
BLA01	Q100386	NA	COPPER			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	COPPER	0.050		0.0545	mg/L	109	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100395	PERKIN ELM	COPPER	0.500		0.438	mg/L	88	

IRON ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	IRON	0.400		0.390	mg/L	98	
DUP02	0969901	A320969	IRON	21500		21400	mg/kg		1
CDL01	Q100411	INORGANIC	IRON	10		9.79	mg/L	98	
ICS-A	Q100410	PERKIN ELM	IRON	200		184.	mg/L	92	
CCV	Q100407	INORGANIC	IRON	5.00		5.02	mg/L	100	
BLA01	Q100406	NA	IRON			< 0.01	mg/L		
LCS	0969897	SPEX	IRON	10.0		9.02	mg/L	90	
BLA02	0969898	NA	IRON			.0575	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	IRON	5.00		5.18	mg/L	104	
BLA01	Q100386	NA	IRON			< 0.01	mg/L		
ICS-A	Q100395	PERKIN ELM	IRON	200		180.	mg/L	90	

MAGNESIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	MAGNESIUM	100		98.1	mg/L	98	
DUP02	0969901	A320969	MAGNESIUM	9340		9830	mg/kg		5
SPI02	0969899	A320969	MAGNESIUM	9340	10000	18200	mg/kg	89	
ICS-A	Q100410	PERKIN ELM	MAGNESIUM	500		476.	mg/L	95	
CCV	Q100407	INORGANIC	MAGNESIUM	50.0		50.2	mg/L	100	
BLA01	Q100406	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0969897	SPEX	MAGNESIUM	100		86.1	mg/L	86	
BLA02	0969898	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	MAGNESIUM	50.0		50.6	mg/L	101	
BLA01	Q100386	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	MAGNESIUM	500		474.	mg/L	95	

MANGANESE ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	MANGANESE	0.400		0.400	mg/L	100	
DUP02	0969901	A320969	MANGANESE	407.		393.	mg/kg		4
CDL01	Q100411	INORGANIC	MANGANESE	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	Q100407	INORGANIC	MANGANESE	5.00		5.05	mg/L	101	
BLA01	Q100406	NA	MANGANESE			< 0.004	mg/L		
LCS	0969897	SPEX	MANGANESE	5.00		4.40	mg/L	88	
BLA02	0969898	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	MANGANESE	5.00		5.06	mg/L	101	
BLA01	Q100386	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	MANGANESE	0.030		0.0277	mg/L	92	
ICS-A	Q100395	PERKIN ELM	MANGANESE	0.500		0.486	mg/L	97	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100417	PERKIN ELM	NICKEL	0.400		0.406	mg/L	102	
DUP02	Q969901	A320969	NICKEL	24.6		25.9	mg/kg		5
SPI02	Q969899	A320969	NICKEL	24.6	50.0	71.0	mg/kg	93	
CDL01	Q100411	INORGANIC	NICKEL	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	
CCV	Q100407	INORGANIC	NICKEL	5.00		5.03	mg/L	101	
BLA01	Q100406	NA	NICKEL			< 0.004	mg/L		
LCS	Q969897	SPEX	NICKEL	5.00		4.40	mg/L	88	
BLA02	Q969898	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	NICKEL	5.00		5.02	mg/L	100	
BLA01	Q100386	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	NICKEL	0.080		0.0761	mg/L	95	
ICS-A	Q100395	PERKIN ELM	NICKEL	1.00		0.912	mg/L	91	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: M126.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102271	PERKIN ELM	POTASSIUM	20.0		19.8	mg/L	99	
ICV01	Q102270	SPEX	POTASSIUM	100		98.2	mg/L	98	
DUP02	Q991343	A320969	POTASSIUM	1940		1630	mg/kg		30
SPI02	Q991341	A320969	POTASSIUM	1940	10000	10200	mg/kg	83	
CCV	Q102247	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q102246	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991339	SPEX	POTASSIUM	100		89.3	mg/L	89	
BLA02	Q991340	NA	POTASSIUM			.304	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q102245	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q102244	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP02	Q969901	A320969	SILVER	0		BDL	mg/kg		
SPI02	Q969899	A320969	SILVER	.74	5	6.47	mg/kg	115	
CDL01	Q100411	INORGANIC	SILVER	2		1.98	mg/L	99	
ICS-A	Q100410	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	
CCV	Q100407	INORGANIC	SILVER	1.00		1.02	mg/L	102	
BLA01	Q100406	NA	SILVER			< 0.006	mg/L		
LCS	Q969897	SPEX	SILVER	0.500		0.429	mg/L	86	
BLA02	Q969898	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100386	NA	SILVER			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	SILVER	0.020		0.0249	mg/L	125	
ICS-A	Q100395	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N131.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SODIUM	2		1.98	mg/L	99	
ICV01	Q100414	SPEX	SODIUM	100		101.	mg/L	101	
DUP02	Q969901	A320969	SODIUM	134.		128.	mg/kg		5
SPI02	Q969899	A320969	SODIUM	134.	10000	9510	mg/kg	94	
CCV	Q100407	INORGANIC	SODIUM	50		50.5	mg/L	101	
BLA01	Q100406	NA	SODIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	SODIUM	100		89.9	mg/L	90	
BLA02	Q969898	NA	SODIUM			.776	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100386	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N138.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229148

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	VANADIUM	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	VANADIUM	20.1		18.7	mg/kg		7
SPI02	Q969899	A320969	VANADIUM	20.1	50.0	68.0	mg/kg	96	
CDL01	Q100411	INORGANIC	VANADIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	VANADIUM	0.500		0.479	mg/L	96	
CCV	Q100407	INORGANIC	VANADIUM	5.00		5.09	mg/L	102	
BLA01	Q100406	NA	VANADIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	VANADIUM	5.00		4.45	mg/L	89	
BLA02	Q969898	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	VANADIUM	5.00		5.10	mg/L	102	
BLA01	Q100386	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	VANADIUM	0.100		0.0955	mg/L	96	
ICS-A	Q100395	PERKIN ELM	VANADIUM	0.500		0.474	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	ZINC	0.400		0.400	mg/L	100	
DUP02	Q969901	A320969	ZINC	145.		150.	mg/kg		3
SPI02	Q969899	A320969	ZINC	145.	50.0	190.	mg/kg	90	
CDL01	Q100411	INORGANIC	ZINC	10		9.82	mg/L	98	
ICS-A	Q100410	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100407	INORGANIC	ZINC	5.00		5.04	mg/L	101	
BLA01	Q100406	NA	ZINC			< 0.008	mg/L		
LCS	Q969897	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q969898	NA	ZINC			.0296	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q100387	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	ZINC			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	ZINC	0.040		0.0432	mg/L	108	
ICS-A	Q100395	PERKIN ELM	ZINC	1.00		0.998	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q108180	PERKIN-ELM	ARSENIC	.04		0.0367	mg/L	92
DUP02	Q969901	A320969	ARSENIC	0		BDL	mg/kg	
SPI02	Q969899	A320969	ARSENIC	0	200	187.	mg/kg	94
CDL01	Q108172	INORGANIC	ARSENIC	.5		0.501	mg/L	100
CCV	Q108164	INORGANIC	ARSENIC	.1		0.0969	mg/L	97
BLA01	Q108165	NA	ARSENIC			< 0.002	mg/L	
LCS	Q969902	INORGANIC	ARSENIC	.5		0.469	mg/L	94
BLA02	Q969903	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A320969		See Certificate of Analysis					
CCV	Q108191	INORGANIC	ARSENIC	.1		0.0965	mg/L	97
BLA01	Q108190	NA	ARSENIC			< 0.002	mg/L	
CDL01	Q108161	PERKIN-ELM	ARSENIC	.02		0.0174	mg/L	87

SELENIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	SELENIUM	.04		0.0425	mg/L	106	
DUP02	Q969901	A320969	SELENIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	SELENIUM	0	200	199.	mg/kg	100	
CDL01	Q108172	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q108164	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q108165	NA	SELENIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	SELENIUM	.5		0.463	mg/L	93	
BLA02	Q969903	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q108191	INORGANIC	SELENIUM	.1		0.0983	mg/L	98	
BLA01	Q108190	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	THALLIUM	.04		0.0419	mg/L	105	
DUP02	Q969901	A320969	THALLIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	THALLIUM	0	300	278.	mg/kg	93	
CDL01	Q108172	INORGANIC	THALLIUM	.5		0.499	mg/L	100	
CCV	Q108164	INORGANIC	THALLIUM	.1		0.0974	mg/L	97	
BLA01	Q108165	NA	THALLIUM			< 0.004	mg/L		
LCS	Q969902	INORGANIC	THALLIUM	.5		0.479	mg/L	96	
BLA02	Q969903	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q108191	INORGANIC	THALLIUM	.1		0.0986	mg/L	99	
BLA01	Q108190	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q108161	PERKIN-ELM	THALLIUM	.02		0.0228	mg/L	114	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	LEAD	.04		0.0388	mg/L	97	
DUP02	Q969901	A320969	LEAD	27.7		30.1	mg/kg		8
SPI02	Q969899	A320969	LEAD	27.7	50.0	73.3	mg/kg	91	
CDL01	Q108172	INORGANIC	LEAD	.5		0.502	mg/L	100	
ICS-A	Q108168	PERKIN ELM	LEAD	1		0.877	mg/L	88	
CCV	Q108164	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108165	NA	LEAD			< 0.002	mg/L		
LCS	Q969902	INORGANIC	LEAD	.5		0.481	mg/L	96	
BLA02	Q969903	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q108191	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108190	NA	LEAD			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	LEAD	.006		0.00561	mg/L	94	
ICS-A	Q108162	PERKIN ELM	LEAD	1		0.849	mg/L	85	

MERCURY CVAA SW846-7471(MOD)

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997707	A320969	MERCURY	0		BDL	mg/kg		
SPI02	Q997705	A320969	MERCURY	0	.25	.266	mg/kg	98.4	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101482		MERCURY	.003		.00283	mg/L	94.3	
BLA01	Q101483		MERCURY			< .00008	mg/L		
LCS	Q997703		MERCURY	.003		.00265	mg/L	88.3	
BLA02	Q997704		MERCURY			< .00008	mg/L		
SAMPLE	A320969		See Certificate of Analysis						
CCV	Q101484		MERCURY	.003		.00271	mg/L	90.3	
BLA01	Q101485		MERCURY			< .00008	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : R. SHAMP Analysis Date: 12-SEP-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: N. WILLIAMS Review Date: 14-SEP-94 File ID: >7813C Run: R229854

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
CCV	Q104465		See Attached Report g7810c.ind						
BLA01	Q104466		See Attached Report g7811c.ind						
SAMPLE	A320969		See Certificate of Analysis						
LCS01	Q104467	EMS	ACETONE (2-PROPANONE)	20		15.7	ug/kg	78.5	
LCS01	Q104467	EMS	BENZENE	20		18.7	ug/kg	93.5	
LCS01	Q104467	EMS	BROMODICHLOROMETHANE	20		17.3	ug/kg	86.5	
LCS01	Q104467	EMS	BROMOFORM	20		18.7	ug/kg	93.5	
LCS01	Q104467	EMS	BROMOMETHANE	20		25	ug/kg	125	
LCS01	Q104467	EMS	CARBON DISULFIDE	20		13.2	ug/kg	66	
LCS01	Q104467	EMS	CARBON TETRACHLORIDE	20		15.5	ug/kg	77.5	
LCS01	Q104467	EMS	CHLOROBENZENE	20		18.5	ug/kg	92.5	
LCS01	Q104467	EMS	CHLOROETHANE	20		19.2	ug/kg	96	
LCS01	Q104467	EMS	CHLOROFORM	20		14.3	ug/kg	71.5	
LCS01	Q104467	EMS	CHLOROMETHANE	20		19.2	ug/kg	96	
LCS01	Q104467	EMS	DIBROMOCHLOROMETHANE	20		18.6	ug/kg	93	
LCS01	Q104467	EMS	CIS-1,3-DICHLOROPROPENE	20		17	ug/kg	85	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS01	Q104467	EMS	1,1-DICHLOROETHANE	20		12.3	ug/kg	61.5	
LCS01	Q104467	EMS	1,2-DICHLOROETHANE	20		15.4	ug/kg	77	
LCS01	Q104467	EMS	1,1-DICHLOROETHENE	20		17	ug/kg	85	
LCS01	Q104467	EMS	1,2-DICHLOROPROPANE	20		15.1	ug/kg	75.5	
LCS01	Q104467	EMS	ETHYL BENZENE	20		16.2	ug/kg	81	
LCS01	Q104467	EMS	2-HEXANONE	20		21.3	ug/kg	106.5	
LCS01	Q104467	EMS	DICHLOROMETHANE (METHYLENE CHLORIDE)	20		19.1	ug/kg	95.5	
LCS01	Q104467	EMS	METHYL ETHYL KETONE	20		12.6	ug/kg	63	
LCS01	Q104467	EMS	4-METHYL-2-PENTANONE	20		18.7	ug/kg	93.5	
LCS01	Q104467	EMS	STYRENE	20		19.4	ug/kg	97	
LCS01	Q104467	EMS	1,1,2,2-TETRACHLOROETHANE	20		19.5	ug/kg	97.5	
LCS01	Q104467	EMS	TETRACHLOROETHENE	20		16.2	ug/kg	81	
LCS01	Q104467	EMS	TOLUENE	20		16	ug/kg	80	
LCS01	Q104467	EMS	1,2-DICHLOROETHENE (CIS AND TRANS)	40		27	ug/kg	67.5	
LCS01	Q104467	EMS	TRANS-1,3-DICHLOROPROPENE	20		18.7	ug/kg	93.5	
LCS01	Q104467	EMS	1,1,1-TRICHLOROETHANE	20		17	ug/kg	85	
LCS01	Q104467	EMS	1,1,2-TRICHLOROETHANE	20		20	ug/kg	100	
LCS01	Q104467	EMS	TRICHLOROETHENE	20		18.6	ug/kg	93	
LCS01	Q104467	EMS	VINYL CHLORIDE	20		20.2	ug/kg	101	
LCS01	Q104467	EMS	XYLENES (O/M/P-XYLENE)	60		54.5	ug/kg	90.8	

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 14-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: J. NINNIEAR, II Review Date: 16-SEP-94 File ID: >0919% Run: R230140

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q102479	A321022	PHENOL	0	3300	2330	ug/kg	70.6	
SPI02	Q102479	A321022	2-CHLOROPHENOL	0	3300	2370	ug/kg	71.8	
SPI02	Q102479	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2160	ug/kg	65.5	
SPI02	Q102479	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q102479	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2100	ug/kg	63.6	
SPI02	Q102479	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2160	ug/kg	65.5	
SPI02	Q102479	A321022	ACENAPHTHENE	0	3300	2190	ug/kg	66.4	
SPI02	Q102479	A321022	4-NITROPHENOL	0	3300	1900	ug/kg	57.6	
SPI02	Q102479	A321022	2,4-DINITROTOLUENE	0	3300	2270	ug/kg	68.8	
SPI02	Q102479	A321022	PENTACHLOROPHENOL	0	3300	1090	ug/kg	33	
SPI02	Q102479	A321022	PYRENE	0	3300	2130	ug/kg	64.5	
DPS02	Q102481	A321022	PHENOL	0	3300	2220	ug/kg	67.3	4.8
DPS02	Q102481	A321022	2-CHLOROPHENOL	0	3300	2520	ug/kg	76.4	6.2
DPS02	Q102481	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2370	ug/kg	71.8	9.2
DPS02	Q102481	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2310	ug/kg	70	5.3
DPS02	Q102481	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2250	ug/kg	68.2	7
DPS02	Q102481	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2360	ug/kg	71.5	8.8
DPS02	Q102481	A321022	ACENAPHTHENE	0	3300	2440	ug/kg	73.9	10.7
DPS02	Q102481	A321022	4-NITROPHENOL	0	3300	2010	ug/kg	60.9	5.6
DPS02	Q102481	A321022	2,4-DINITROTOLUENE	0	3300	2360	ug/kg	71.5	3.8
DPS02	Q102481	A321022	PENTACHLOROPHENOL	0	3300	1200	ug/kg	36.4	9.8
DPS02	Q102481	A321022	PYRENE	0	3300	2410	ug/kg	73	12.4
CCV	Q106439		See Attached Report g0916b.ind						
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320969		See Certificate of Analysis						
LCS	Q102476	HLI	ACENAPHTHENE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	ACENAPHTHYLENE	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	ANTHRACENE	3300		1290	ug/kg	39.1	
LCS	Q102476	HLI	BENZO(A)PYRENE	3300		1340	ug/kg	40.6	
LCS	Q102476	HLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	BENZO(K)FLUORANTHENE	3300		1430	ug/kg	43.3	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q102476	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	3300		1700	ug/kg	51.5	
LCS	Q102476	HLI	BIS(2-CHLOROETHOXY)METHANE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	BIS(2-CHLOROETHYL)ETHER	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	BIS(2-CHLOROISOPROPYL)ETHER	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	4-BROMODIPHENYL ETHER	3300		* 1500	ug/kg	45.5	
LCS	Q102476	HLI	CARBAZOLE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-CHLOROANILINE	3300		1170	ug/kg	35.5	
LCS	Q102476	HLI	2-CHLORONAPHTHALENE	3300		3110	ug/kg	94.2	
LCS	Q102476	HLI	4-CHLOROPHENYL-PHENYLETHER	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	CHRYSENE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	DIBENZ(A,H)ANTHRACENE	3300		1370	ug/kg	41.5	
LCS	Q102476	HLI	DIBENZOFURAN	3300		1630	ug/kg	49.4	
LCS	Q102476	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3,3'-DICHLOROBENZIDINE	3300		1280	ug/kg	38.8	
LCS	Q102476	HLI	DIETHYLPHTHALATE	3300		1480	ug/kg	44.8	
LCS	Q102476	HLI	DIMETHYLPHTHALATE	3300		1640	ug/kg	49.7	
LCS	Q102476	HLI	DI-N-BUTYLPHTHALATE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	2,4-DINITROTOLUENE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	2,6-DINITROTOLUENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	DI-N-OCTYLPHTHALATE	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	FLUORANTHENE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	FLUORENE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	HEXACHLOROBENZENE	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	HEXACHLOROBUTADIENE	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	HEXACHLOROCYCLOPENTADIENE	3300		1380	ug/kg	41.8	
LCS	Q102476	HLI	HEXACHLOROETHANE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	INDENO(1,2,3-CD)PYRENE	3300		1140	ug/kg	34.5	
LCS	Q102476	HLI	ISOPHORONE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-METHYLNAPHTHALENE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	NAPHTHALENE	3300		1610	ug/kg	48.8	
LCS	Q102476	HLI	2-NITROANILINE (O-NITROANILINE)	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3-NITROANILINE (M-NITROANILINE)	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-NITROANILINE (P-NITROANILINE)	3300		1330	ug/kg	40.3	
LCS	Q102476	HLI	NITROBENZENE	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	N-NITROSODIPHENYLAMINE	6600		2920	ug/kg	44.2	
LCS	Q102476	HLI	N-NITROSO-DI-N-PROPYLAMINE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	PHENANTHRENE	3300		* 1450	ug/kg	43.9	
LCS	Q102476	HLI	PYRENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	1,2,4-TRICHLOROBENZENE	3300		1500	ug/kg	45.5	
LCS	Q102476	HLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-CHLOROPHENOL	3300		1550	ug/kg	47	
LCS	Q102476	HLI	2,4-DICHLOROPHENOL	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2,4-DIMETHYLPHENOL	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	2,4-DINITROPHENOL	3300		729	ug/kg	22.1	
LCS	Q102476	HLI	2-METHYLPHENOL (O-CRESOL)	3300		1550	ug/kg	47	
LCS	Q102476	HLI	4-METHYLPHENOL (P-CRESOL)	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2-NITROPHENOL	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	4-NITROPHENOL	3300		1110	ug/kg	33.6	
LCS	Q102476	HLI	PENTACHLOROPHENOL	3300		776	ug/kg	23.5	
LCS	Q102476	HLI	PHENOL	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	2,4,5-TRICHLOROPHENOL	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	2,4,6-TRICHLOROPHENOL	3300		1490	ug/kg	45.2	

HERITAGE ENVIRONMENTAL SERVICES, INC. Lab Sample ID: A320969

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 22-SEP-94 File ID: 5418 Run: R230887

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
BLA02	Q106685		See Attached Report g8001f.ind					
SAMPLE	A320969		See Certificate of Analysis					

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: HWBurch

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320970
	Complete	PO Number
	27-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 09:50

Sample Description

SAMPLE I.D.: D-083094-KJJ-108
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : K. PFEFFER Analysis Date: 12-SEP-94 Instrument: TOC Test: G481.8.8
Reviewer: B. BURAKE Review Date: 13-SEP-94 File ID: 2072-2073 Run: R229695

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0103622		TOTAL ORGANIC CARBON (TOC)	46.2		42.8	mg/L	92.6	
ICV01	0103635		TOTAL ORGANIC CARBON (TOC)	46.2		45.6	mg/L	98.7	
SP101	0103627	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2090	mg/kg	104.5	
DPS01	0103628	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1
BLA01	0103620		TOTAL ORGANIC CARBON (TOC)			-.146	mg/L		
CDL01	0103621		TOTAL ORGANIC CARBON (TOC)	10		9.13	mg/L	91.3	
SAMPLE	A320970		See Certificate of Analysis						
CCV	0103630		TOTAL ORGANIC CARBON (TOC)	50		50.6	mg/L	101.2	
BLA01	0103631		TOTAL ORGANIC CARBON (TOC)			-.539	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : B. BALK Analysis Date: 02-SEP-94 Test: G601.7.8
Reviewer: B. PRIDEMORE Review Date: 03-SEP-94 File ID: 4158-4160 Run: R228859

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	0998689	A320969	SOLIDS	84		79	Percent		6.1
LCS01	0998487		SOLIDS	9.997		9.9976	Grams	100	
SAMPLE	A320970		See Certificate of Analysis						
LCS01	0998490		SOLIDS	8.6872		8.6858	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOKES Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER Test: G101.4.8
Reviewer: P. ANDERSON Review Date: 07-SEP-94 File ID: Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	0999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	0999823		CYANIDE	.205		.202	mg/L	98.5	
DUP02	0999807	A320790	CYANIDE	0		BDL	mg/L		
SP102	0999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
CDL01	0999804		CYANIDE	.005		.0038	mg/L	76	
CCV	0999809		CYANIDE	.1		.101	mg/L	101	
BLA01	0999810		CYANIDE			0	mg/L		
BLA02	0999806		CYANIDE			0	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	0999819		CYANIDE	.1		.098	mg/L	98	
BLA01	0999820		CYANIDE			-.001	mg/L		
LFB02	0999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100415	PERKIN ELM	ALUMINUM	2.00		1.99	mg/L	100	
DUP02	Q969901	A320969	ALUMINUM	11300		10100	mg/kg		11
CDL01	Q100411	INORGANIC	ALUMINUM	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	
CCV	Q100387	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	Q100386	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q969897	SPEX	ALUMINUM	20.0		18.0	mg/L	90	
BLA02	Q969898	NA	ALUMINUM			.117	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ALUMINUM	5.00		5.26	mg/L	105	
BLA01	Q100384	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q100395	PERKIN ELM	ALUMINUM	500		488.	mg/L	98	

ANTIMONY ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102273	PERKIN ELM	ANTIMONY	0.400		0.385	mg/L	96	
DUP02	Q991343	A320969	ANTIMONY	6.73		5.40	mg/kg		22
SP102	Q991341	A320969	ANTIMONY	6.73	50	32.7	mg/kg	52	
CDL01	Q102268	PERKIN ELM	ANTIMONY	0.120		0.118	mg/L	98	
CCV	Q102265	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q102264	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q991339	SPEX	ANTIMONY	5.00		4.62	mg/L	92	
BLA02	Q991340	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q102243	INORGANIC	ANTIMONY	1.00		0.997	mg/L	100	
BLA01	Q102242	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q102241	PERKIN ELM	ANTIMONY	0.120		0.122	mg/L	102	

BARIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q969901	A320969	BARIUM	49.7		46.9	mg/kg		6
SP102	Q969899	A320969	BARIUM	49.7	200	248.	mg/kg	99	
CDL01	Q100411	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BARIUM	0.500		0.506	mg/L	101	
CCV	Q100387	INORGANIC	BARIUM	5.00		5.12	mg/L	102	
BLA01	Q100386	NA	BARIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	BARIUM	20.0		18.2	mg/L	91	
BLA02	Q969898	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BARIUM	5.00		5.11	mg/L	102	
BLA01	Q100384	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100395	PERKIN ELM	BARIUM	0.500		0.496	mg/L	99	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	BERYLLIUM	0.400		0.395	mg/L	99	
DUP02	0969901	A320969	BERYLLIUM	0.663		0.503	mg/kg		27
SPI02	0969899	A320969	BERYLLIUM	0.663	5.00	5.35	mg/kg	94	
CDL01	Q100411	INORGANIC	BERYLLIUM	10		9.88	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BERYLLIUM	0.500		0.486	mg/L	97	
CCV	Q100387	INORGANIC	BERYLLIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	BERYLLIUM			< 0.002	mg/L		
LCS	0969897	SPEX	BERYLLIUM	0.500		0.447	mg/L	89	
BLA02	0969898	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BERYLLIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	BERYLLIUM	0.010		0.00961	mg/L	96	
ICS-A	Q100395	PERKIN ELM	BERYLLIUM	0.500		0.480	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	CADMIUM	0.400		0.412	mg/L	103	
DUP02	0969901	A320969	CADMIUM	1.28		1.29	mg/kg		1
SPI02	0969899	A320969	CADMIUM	1.28	5.00	6.13	mg/kg	97	
CDL01	Q100411	INORGANIC	CADMIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	CADMIUM	1.00		0.964	mg/L	96	
CCV	Q100387	INORGANIC	CADMIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	CADMIUM			< 0.002	mg/L		
LCS	0969902	INORGANIC	CADMIUM	.5		0.474	mg/L	95	
BLA02	0969903	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CADMIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	CADMIUM	0.010		0.0124	mg/L	124	
ICS-A	Q100395	PERKIN ELM	CADMIUM	1.00		0.934	mg/L	93	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	CALCIUM	100		97.3	mg/L	97	
DUP02	0969901	A320969	CALCIUM	17100		17400	mg/kg		2
SPI02	0969899	A320969	CALCIUM	17100	10000	24900	mg/kg	78	
ICS-A	Q100410	PERKIN ELM	CALCIUM	500		460.	mg/L	92	
CCV	Q100387	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q100386	NA	CALCIUM			< 0.08	mg/L		
LCS	0969897	SPEX	CALCIUM	100		87.0	mg/L	87	
BLA02	0969898	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100384	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	CALCIUM	500		456.	mg/L	91	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100417	PERKIN ELM	CHROMIUM	0.400		0.405	mg/L	101	
DUP02	0969901	A320969	CHROMIUM	22.4		22.6	mg/kg		1
SPI02	0969899	A320969	CHROMIUM	22.4	20.0	41.6	mg/kg	96	
CDL01	Q100411	INORGANIC	CHROMIUM	10		9.93	mg/L	99	
ICS-A	Q100410	PERKIN ELM	CHROMIUM	0.500		0.487	mg/L	97	
CCV	Q100387	INORGANIC	CHROMIUM	5.00		5.08	mg/L	102	
BLA01	Q100386	NA	CHROMIUM			< 0.004	mg/L		
LCS	0969897	SPEX	CHROMIUM	2.00		1.79	mg/L	90	
BLA02	0969898	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100384	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	CHROMIUM	0.020		0.0180	mg/L	90	
ICS-A	Q100395	PERKIN ELM	CHROMIUM	0.500		0.483	mg/L	97	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COBALT	0.400		0.407	mg/L	102	
DUP02	0969901	A320969	COBALT	8.92		9.09	mg/kg		2
SPI02	0969899	A320969	COBALT	8.92	50.0	56.8	mg/kg	96	
CDL01	Q100411	INORGANIC	COBALT	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COBALT	0.500		0.471	mg/L	94	
CCV	Q100387	INORGANIC	COBALT	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	COBALT			< 0.004	mg/L		
LCS	0969897	SPEX	COBALT	5.00		4.42	mg/L	88	
BLA02	0969898	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COBALT	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	COBALT			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	COBALT	0.100		0.0926	mg/L	93	
ICS-A	Q100395	PERKIN ELM	COBALT	0.500		0.465	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COPPER	0.400		0.406	mg/L	101	
DUP02	0969901	A320969	COPPER	16.0		15.8	mg/kg		1
SPI02	0969899	A320969	COPPER	16.0	25.0	40.9	mg/kg	100	
CDL01	Q100411	INORGANIC	COPPER	10		9.90	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100387	INORGANIC	COPPER	5.00		5.15	mg/L	103	
BLA01	Q100386	NA	COPPER			< 0.008	mg/L		
LCS	0969897	SPEX	COPPER	2.50		2.25	mg/L	90	
BLA02	0969898	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COPPER	5.00		5.14	mg/L	103	
BLA01	Q100384	NA	COPPER			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	COPPER	0.050		0.0545	mg/L	109	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100395	PERKIN ELM	COPPER	0.500		0.438	mg/L	88	

IRON ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	IRON	0.400		0.390	mg/L	98	
DUP02	Q969901	A320969	IRON	21500		21400	mg/kg		1
CDL01	Q100411	INORGANIC	IRON	10		9.79	mg/L	98	
ICS-A	Q100410	PERKIN ELM	IRON	200		184.	mg/L	92	
CCV	Q100387	INORGANIC	IRON	5.00		5.18	mg/L	104	
BLA01	Q100386	NA	IRON			< 0.01	mg/L		
LCS	Q969897	SPEX	IRON	10.0		9.02	mg/L	90	
BLA02	Q969898	NA	IRON			.0575	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	IRON	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	IRON			< 0.01	mg/L		
ICS-A	Q100395	PERKIN ELM	IRON	200		180.	mg/L	90	

MAGNESIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	MAGNESIUM	100		98.1	mg/L	98	
DUP02	Q969901	A320969	MAGNESIUM	9340		9830	mg/kg		5
SPI02	Q969899	A320969	MAGNESIUM	9340	10000	18200	mg/kg	89	
ICS-A	Q100410	PERKIN ELM	MAGNESIUM	500		476.	mg/L	95	
CCV	Q100387	INORGANIC	MAGNESIUM	50.0		50.6	mg/L	101	
BLA01	Q100386	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	MAGNESIUM	100		86.1	mg/L	86	
BLA02	Q969898	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MAGNESIUM	50.0		50.4	mg/L	101	
BLA01	Q100384	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	MAGNESIUM	500		474.	mg/L	95	

MANGANESE ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	MANGANESE	0.400		0.400	mg/L	100	
DUP02	Q969901	A320969	MANGANESE	407.		393.	mg/kg		4
CDL01	Q100411	INORGANIC	MANGANESE	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	Q100387	INORGANIC	MANGANESE	5.00		5.06	mg/L	101	
BLA01	Q100386	NA	MANGANESE			< 0.004	mg/L		
LCS	Q969897	SPEX	MANGANESE	5.00		4.40	mg/L	88	
BLA02	Q969898	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MANGANESE	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	MANGANESE	0.030		0.0277	mg/L	92	
ICS-A	Q100395	PERKIN ELM	MANGANESE	0.500		0.486	mg/L	97	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	NICKEL	0.400		0.406	mg/L	102	
DUP02	0969901	A320969	NICKEL	24.6		25.9	mg/kg		5
SPI02	0969899	A320969	NICKEL	24.6	50.0	71.0	mg/kg	93	
CDL01	Q100411	INORGANIC	NICKEL	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	
CCV	Q100387	INORGANIC	NICKEL	5.00		5.02	mg/L	100	
BLA01	Q100386	NA	NICKEL			< 0.004	mg/L		
LCS	0969897	SPEX	NICKEL	5.00		4.40	mg/L	88	
BLA02	0969898	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	NICKEL	5.00		5.01	mg/L	100	
BLA01	Q100384	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	NICKEL	0.080		0.0761	mg/L	95	
ICS-A	Q100395	PERKIN ELM	NICKEL	1.00		0.912	mg/L	91	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: N126.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102271	PERKIN ELM	POTASSIUM	20.0		19.8	mg/L	99	
ICV01	Q102270	SPEX	POTASSIUM	100		98.2	mg/L	98	
DUP02	0991343	A320969	POTASSIUM	1940		1430	mg/kg		30
SPI02	0991341	A320969	POTASSIUM	1940	10000	10200	mg/kg	83	
CCV	Q102245	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q102244	NA	POTASSIUM			< 0.08	mg/L		
LCS	0991339	SPEX	POTASSIUM	100		89.3	mg/L	89	
BLA02	0991340	NA	POTASSIUM			.304	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q102243	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q102242	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP02	0969901	A320969	SILVER	0		BDL	mg/kg		
SPI02	0969899	A320969	SILVER	.74	5	6.47	mg/kg	115	
CDL01	Q100411	INORGANIC	SILVER	2		1.98	mg/L	99	
ICS-A	Q100410	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	
CCV	Q100387	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100386	NA	SILVER			< 0.004	mg/L		
LCS	0969897	SPEX	SILVER	0.500		0.429	mg/L	86	
BLA02	0969898	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100384	NA	SILVER			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	SILVER	0.020		0.0249	mg/L	125	
ICS-A	Q100395	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

SODIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SODIUM	2		1.98	mg/L	99	
ICV01	Q100414	SPEX	SODIUM	100		101.	mg/L	101	
DUP02	Q969901	A320969	SODIUM	134.		128.	mg/kg		5
SPI02	Q969899	A320969	SODIUM	134.	10000	9510	mg/kg	94	
CCV	Q100387	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100386	NA	SODIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	SODIUM	100		89.9	mg/L	90	
BLA02	Q969898	NA	SODIUM			.776	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100384	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	VANADIUM	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	VANADIUM	20.1		18.7	mg/kg		7
SPI02	Q969899	A320969	VANADIUM	20.1	50.0	68.0	mg/kg	96	
CDL01	Q100411	INORGANIC	VANADIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	VANADIUM	0.500		0.479	mg/L	96	
CCV	Q100387	INORGANIC	VANADIUM	5.00		5.10	mg/L	102	
BLA01	Q100386	NA	VANADIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	VANADIUM	5.00		4.45	mg/L	89	
BLA02	Q969898	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	VANADIUM	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	VANADIUM	0.100		0.0955	mg/L	96	
ICS-A	Q100395	PERKIN ELM	VANADIUM	0.500		0.474	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	ZINC	0.400		0.400	mg/L	100	
DUP02	Q969901	A320969	ZINC	145.		150.	mg/kg		3
SPI02	Q969899	A320969	ZINC	145.	50.0	190.	mg/kg	90	
CDL01	Q100411	INORGANIC	ZINC	10		9.82	mg/L	98	
ICS-A	Q100410	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100387	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	ZINC			< 0.008	mg/L		
LCS	Q969897	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q969898	NA	ZINC			.0296	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	ZINC			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	ZINC	0.040		0.0432	mg/L	108	
ICS-A	Q100395	PERKIN ELM	ZINC	1.00		0.998	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M105.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q108180	PERKIN-ELM	ARSENIC	.04		0.0367	mg/L	92
DUP02	Q969901	A320969	ARSENIC	0		BDL	mg/kg	
SPI02	Q969899	A320969	ARSENIC	0	200	187.	mg/kg	94
CDL01	Q108172	INORGANIC	ARSENIC	.5		0.501	mg/L	100
CCV	Q108164	INORGANIC	ARSENIC	.1		0.0969	mg/L	97
BLA01	Q108165	NA	ARSENIC			< 0.002	mg/L	
LCS	Q969902	INORGANIC	ARSENIC	.5		0.469	mg/L	94
BLA02	Q969903	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A320970		See Certificate of Analysis					
CCV	Q108191	INORGANIC	ARSENIC	.1		0.0965	mg/L	97
BLA01	Q108190	NA	ARSENIC			< 0.002	mg/L	
CDL01	Q108161	PERKIN-ELM	ARSENIC	.02		0.0174	mg/L	87

SELENIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	SELENIUM	.04		0.0425	mg/L	106	
DUP02	Q969901	A320969	SELENIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	SELENIUM	0	200	199.	mg/kg	100	
CDL01	Q108172	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q108164	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q108165	NA	SELENIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	SELENIUM	.5		0.463	mg/L	93	
BLA02	Q969903	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q108191	INORGANIC	SELENIUM	.1		0.0983	mg/L	98	
BLA01	Q108190	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	THALLIUM	.04		0.0419	mg/L	105	
DUP02	Q969901	A320969	THALLIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	THALLIUM	0	300	278.	mg/kg	93	
CDL01	Q108172	INORGANIC	THALLIUM	.5		0.499	mg/L	100	
CCV	Q108164	INORGANIC	THALLIUM	.1		0.0974	mg/L	97	
BLA01	Q108165	NA	THALLIUM			< 0.004	mg/L		
LCS	Q969902	INORGANIC	THALLIUM	.5		0.479	mg/L	96	
BLA02	Q969903	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q108191	INORGANIC	THALLIUM	.1		0.0986	mg/L	99	
BLA01	Q108190	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q108161	PERKIN-ELM	THALLIUM	.02		0.0228	mg/L	114	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	LEAD	.04		0.0388	mg/L	97	
DUP02	Q969901	A320969	LEAD	27.7		30.1	mg/kg		8
SPI02	Q969899	A320969	LEAD	27.7	50.0	73.3	mg/kg	91	
CDL01	Q108172	INORGANIC	LEAD	.5		0.502	mg/L	100	
ICS-A	Q108168	PERKIN ELM	LEAD	1		0.877	mg/L	88	
CCV	Q108164	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108165	NA	LEAD			< 0.002	mg/L		
LCS	Q969902	INORGANIC	LEAD	.5		0.481	mg/L	96	
BLA02	Q969903	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q108191	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108190	NA	LEAD			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	LEAD	.006		0.00561	mg/L	94	
ICS-A	Q108162	PERKIN ELM	LEAD	1		0.849	mg/L	85	

MERCURY CVAA SW846-7471(MOD)

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997707	A320969	MERCURY	0		BDL	mg/kg		
SPI02	Q997705	A320969	MERCURY	0	.25	.246	mg/kg	98.4	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101482		MERCURY	.003		.00283	mg/L	94.3	
BLA01	Q101483		MERCURY			< .00008	mg/L		
LCS	Q997703		MERCURY	.003		.00265	mg/L	88.3	
BLA02	Q997704		MERCURY			< .00008	mg/L		
SAMPLE	A320970		See Certificate of Analysis						
CCV	Q101484		MERCURY	.003		.00271	mg/L	90.3	
BLA01	Q101485		MERCURY			< .00008	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: O510.9.0
Reviewer: R. SWAMP Review Date: 16-SEP-94 File ID: >7843C Run: R230149

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106487	A321023	1,1-DICHLOROETHENE	0	50	44.1	ug/kg	88.2	
SPI01	Q106487	A321023	TRICHLOROETHENE	0	50	43.3	ug/kg	86.6	
SPI01	Q106487	A321023	BENZENE	0	50	46.4	ug/kg	92.8	
SPI01	Q106487	A321023	TOLUENE	0	50	47.5	ug/kg	95	
SPI01	Q106487	A321023	CHLOROBENZENE	0	50	41.6	ug/kg	83.2	
DPS01	Q106488	A321023	1,1-DICHLOROETHENE	0	50	43.6	ug/L	87.2	1.1
DPS01	Q106488	A321023	TRICHLOROETHENE	0	50	43.6	ug/L	87.2	.7
DPS01	Q106488	A321023	BENZENE	0	50	46.4	ug/L	92.8	0
DPS01	Q106488	A321023	TOLUENE	0	50	51	ug/L	102	7.1
DPS01	Q106488	A321023	CHLOROBENZENE	0	50	43.8	ug/L	87.6	6.6
CCV	Q106485		See Attached Report g7840c.ind						
BLA01	Q106486		See Attached Report g7841c.ind						
SAMPLE	A320970		See Certificate of Analysis						

Comments

Q106487 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

Comments

Q106488 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. WILSON Analysis Date: 15-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: A. BRADBURN Review Date: 19-SEP-94 File ID: >8024F Run: B230436

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SP102	Q102479	A321022	PHENOL	0	3300	2330	ug/kg	70.6	
SP102	Q102479	A321022	2-CHLOROPHENOL	0	3300	2370	ug/kg	71.8	
SP102	Q102479	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2160	ug/kg	65.5	
SP102	Q102479	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SP102	Q102479	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2100	ug/kg	63.6	
SP102	Q102479	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2160	ug/kg	65.5	
SP102	Q102479	A321022	ACENAPHTHENE	0	3300	2190	ug/kg	66.4	
SP102	Q102479	A321022	4-NITROPHENOL	0	3300	1900	ug/kg	57.6	
SP102	Q102479	A321022	2,4-DINITROTOLUENE	0	3300	2270	ug/kg	68.8	
SP102	Q102479	A321022	PENTACHLOROPHENOL	0	3300	1090	ug/kg	33	
SP102	Q102479	A321022	PYRENE	0	3300	2130	ug/kg	64.5	
DPS02	Q102481	A321022	PHENOL	0	3300	2220	ug/kg	67.3	4.8
DPS02	Q102481	A321022	2-CHLOROPHENOL	0	3300	2520	ug/kg	76.4	6.2
DPS02	Q102481	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2370	ug/kg	71.8	9.2
DPS02	Q102481	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2310	ug/kg	70	5.3
DPS02	Q102481	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2250	ug/kg	68.2	7
DPS02	Q102481	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2360	ug/kg	71.5	8.8
DPS02	Q102481	A321022	ACENAPHTHENE	0	3300	2440	ug/kg	73.9	10.7
DPS02	Q102481	A321022	4-NITROPHENOL	0	3300	2010	ug/kg	60.9	5.6
DPS02	Q102481	A321022	2,4-DINITROTOLUENE	0	3300	2360	ug/kg	71.5	3.8
DPS02	Q102481	A321022	PENTACHLOROPHENOL	0	3300	1200	ug/kg	36.4	
DPS02	Q102481	A321022	PYRENE	0	3300	2410	ug/kg	73	
CCV	Q107995		See Attached Report g8020f.ind						
BLA01	Q107994		See Attached Report g8021f.ind						
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320970		See Certificate of Analysis						
LCS	Q102476	MLI	ACENAPHTHENE	3300		1570	ug/kg	47.6	
LCS	Q102476	MLI	ACENAPHTHYLENE	3300		1440	ug/kg	43.6	
LCS	Q102476	MLI	ANTHRACENE	3300		1290	ug/kg	39.1	
LCS	Q102476	MLI	BENZO(A)PYRENE	3300		1340	ug/kg	40.6	
LCS	Q102476	MLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	3300		1430	ug/kg	43.3	
LCS	Q102476	MLI	BENZO(K)FLUORANTHENE	3300		1430	ug/kg	43.3	
LCS	Q102476	MLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	3300		1700	ug/kg	51.5	
LCS	Q102476	MLI	BIS(2-CHLOROETHOXY)METHANE	3300		1570	ug/kg	47.6	
LCS	Q102476	MLI	BIS(2-CHLOROETHYL)ETHER	3300		1440	ug/kg	43.6	
LCS	Q102476	MLI	BIS(2-CHLOROISOPROPYL)ETHER	3300		1620	ug/kg	49.1	
LCS	Q102476	MLI	BIS(2-ETHYLHEXYL)PHTHALATE	3300		1580	ug/kg	47.9	
LCS	Q102476	MLI	4-BROMODIPHENYL ETHER	3300		* 1500	ug/kg	45.5	
LCS	Q102476	MLI	CARBAZOLE	3300		1520	ug/kg	46.1	
LCS	Q102476	MLI	4-CHLOROANILINE	3300		1170	ug/kg	35.5	
LCS	Q102476	MLI	2-CHLORONAPHTHALENE	3300		3110	ug/kg	94.2	
LCS	Q102476	MLI	4-CHLOROPHENYL-PHENYLETHER	3300		1520	ug/kg	46.1	
LCS	Q102476	MLI	CHRYSENE	3300		1750	ug/kg	53	
LCS	Q102476	MLI	DIBENZ(A,H)ANTHRACENE	3300		1370	ug/kg	41.5	
LCS	Q102476	MLI	DIBENZOFURAN	3300		1630	ug/kg	49.4	
LCS	Q102476	MLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	3300		1470	ug/kg	44.5	
LCS	Q102476	MLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	3300		1550	ug/kg	47	
LCS	Q102476	MLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	3300		1530	ug/kg	46.4	
LCS	Q102476	MLI	3,3'-DICHLOROBENZIDINE	3300		1280	ug/kg	38.8	
LCS	Q102476	MLI	DIETHYLPHTHALATE	3300		1480	ug/kg	44.8	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q102476	MLI	DIMETHYLPHTHALATE	3300		1640	ug/kg	49.7	
LCS	Q102476	MLI	DI-N-BUTYLPHTHALATE	3300		1520	ug/kg	46.1	
LCS	Q102476	MLI	2,4-DINITROTOLUENE	3300		1530	ug/kg	46.4	
LCS	Q102476	MLI	2,6-DINITROTOLUENE	3300		* 1550	ug/kg	47	
LCS	Q102476	MLI	DI-N-OCTYLPHTHALATE	3300		1460	ug/kg	44.2	
LCS	Q102476	MLI	FLUORANTHENE	3300		1470	ug/kg	44.5	
LCS	Q102476	MLI	FLUORENE	3300		1550	ug/kg	47	
LCS	Q102476	MLI	HEXACHLOROBENZENE	3300		1540	ug/kg	46.7	
LCS	Q102476	MLI	HEXACHLOROBUTADIENE	3300		1560	ug/kg	47.3	
LCS	Q102476	MLI	HEXACHLOROCYCLOPENTADIENE	3300		1380	ug/kg	41.8	
LCS	Q102476	MLI	HEXACHLOROETHANE	3300		1620	ug/kg	49.1	
LCS	Q102476	MLI	INDENO(1,2,3-CD)PYRENE	3300		1140	ug/kg	34.5	
LCS	Q102476	MLI	ISOPHORONE	3300		1580	ug/kg	47.9	
LCS	Q102476	MLI	2-METHYLNAPHTHALENE	3300		1620	ug/kg	49.1	
LCS	Q102476	MLI	NAPHTHALENE	3300		1610	ug/kg	48.8	
LCS	Q102476	MLI	2-NITROANILINE (O-NITROANILINE)	3300		1530	ug/kg	46.4	
LCS	Q102476	MLI	3-NITROANILINE (M-NITROANILINE)	3300		1520	ug/kg	46.1	
LCS	Q102476	MLI	4-NITROANILINE (P-NITROANILINE)	3300		1330	ug/kg	40.3	
LCS	Q102476	MLI	NITROBENZENE	3300		1590	ug/kg	48.2	
LCS	Q102476	MLI	N-NITROSODIPHENYLAMINE	6600		2920	ug/kg	44.2	
LCS	Q102476	MLI	N-NITROSO-DI-N-PROPYLAMINE	3300		1750	ug/kg	53	
LCS	Q102476	MLI	PHENANTHRENE	3300		* 1450	ug/kg	43.9	
LCS	Q102476	MLI	PYRENE	3300		* 1550	ug/kg	47	
LCS	Q102476	MLI	1,2,4-TRICHLOROBENZENE	3300		1500	ug/kg	45.5	
LCS	Q102476	MLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	3300		1580	ug/kg	47.9	
LCS	Q102476	MLI	2-CHLOROPHENOL	3300		1550	ug/kg	47	
LCS	Q102476	MLI	2,4-DICHLOROPHENOL	3300		1590	ug/kg	48.2	
LCS	Q102476	MLI	2,4-DIMETHYLPHENOL	3300		1460	ug/kg	44.2	
LCS	Q102476	MLI	2,4-DINITROPHENOL	3300		729	ug/kg	22.1	
LCS	Q102476	MLI	2-METHYLPHENOL (O-CRESOL)	3300		1550	ug/kg	47	
LCS	Q102476	MLI	4-METHYLPHENOL (P-CRESOL)	3300		1590	ug/kg	48.2	
LCS	Q102476	MLI	2-NITROPHENOL	3300		1540	ug/kg	46.7	
LCS	Q102476	MLI	4-NITROPHENOL	3300		1110	ug/kg	33.6	
LCS	Q102476	MLI	PENTACHLOROPHENOL	3300		776	ug/kg	23.5	
LCS	Q102476	MLI	PHENOL	3300		1560	ug/kg	47.3	
LCS	Q102476	MLI	2,4,5-TRICHLOROPHENOL	3300		1430	ug/kg	43.3	
LCS	Q102476	MLI	2,4,6-TRICHLOROPHENOL	3300		1490	ug/kg	45.2	

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: Q305.1.0

Reviewer: L. JULIAN Review Date: 22-SEP-94 File ID: 5418 Run: R230887

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q106685		See Attached Report g8091f.ind						
SAMPLE	A320970		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: G A Brock

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320971
	Complete	PO Number
	27-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 10:25

Sample Description

SAMPLE I.D.: D-083094-KJJ-109
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 12-SEP-94 Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 13-SEP-94 File ID: 2072-2073 — Run: R229693

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103622		TOTAL ORGANIC CARBON (TOC)	46.2		42.8	mg/L	92.6	
ICV01	Q103635		TOTAL ORGANIC CARBON (TOC)	46.2		45.6	mg/L	98.7	
SPI01	Q103627	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2090	mg/kg	104.5	
DPS01	Q103628	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1
BLA01	Q103620		TOTAL ORGANIC CARBON (TOC)			-.146	mg/L		
CDL01	Q103621		TOTAL ORGANIC CARBON (TOC)	10		9.13	mg/L	91.3	
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q103630		TOTAL ORGANIC CARBON (TOC)	50		50.6	mg/L	101.2	
BLA01	Q103631		TOTAL ORGANIC CARBON (TOC)			-.539	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : B. HAUK — Analysis Date: 02-SEP-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 03-SEP-94 File ID: 4158-4160 — Run: R228859

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q998489	A320969	SOLIDS	84		79	Percent		6.1
LCS01	Q998487		SOLIDS	9.997		9.9976	Grams	100	
SAMPLE	A320971		See Certificate of Analysis						
LCS01	Q998490		SOLIDS	8.6872		8.6858	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 06-SEP-94 Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 07-SEP-94 File ID: — Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q999819		CYANIDE	.1		.098	mg/L	98	
BLA01	Q999820		CYANIDE			-.001	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100415	PERKIN ELM	ALUMINUM	2.00		1.99	mg/L	100	
DUP02	Q969901	A320969	ALUMINUM	11300		10100	mg/kg		11
CDL01	Q100411	INORGANIC	ALUMINUM	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	
CCV	Q100387	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	Q100386	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q969897	SPEX	ALUMINUM	20.0		18.0	mg/L	90	
BLA02	Q969898	NA	ALUMINUM			.117	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ALUMINUM	5.00		5.26	mg/L	105	
BLA01	Q100384	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q100395	PERKIN ELM	ALUMINUM	500		488.	mg/L	98	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102273	PERKIN ELM	ANTIMONY	0.400		0.385	mg/L	96	
DUP02	Q991343	A320969	ANTIMONY	6.73		5.40	mg/kg		22
SPI02	Q991341	A320969	ANTIMONY	6.73	50	32.7	mg/kg	52	
CDL01	Q102268	PERKIN ELM	ANTIMONY	0.120		0.118	mg/L	98	
CCV	Q102265	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q102244	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q991339	SPEX	ANTIMONY	5.00		4.62	mg/L	92	
BLA02	Q991340	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q102243	INORGANIC	ANTIMONY	1.00		0.997	mg/L	100	
BLA01	Q102242	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q102241	PERKIN ELM	ANTIMONY	0.120		0.122	mg/L	102	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q969901	A320969	BARIUM	49.7		46.9	mg/kg		6
SPI02	Q969899	A320969	BARIUM	49.7	200	248.	mg/kg	99	
CDL01	Q100411	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BARIUM	0.500		0.504	mg/L	101	
CCV	Q100387	INORGANIC	BARIUM	5.00		5.12	mg/L	102	
BLA01	Q100386	NA	BARIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	BARIUM	20.0		18.2	mg/L	91	
BLA02	Q969898	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BARIUM	5.00		5.11	mg/L	102	
BLA01	Q100384	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100395	PERKIN ELM	BARIUM	0.500		0.496	mg/L	99	

BERYLLIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	BERYLLIUM	0.400		0.395	mg/L	99	
DUP02	Q969901	A320969	BERYLLIUM	0.663		0.503	mg/kg		27
SPI02	Q969899	A320969	BERYLLIUM	0.663	5.00	5.35	mg/kg	94	
CDL01	Q100411	INORGANIC	BERYLLIUM	10		9.88	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BERYLLIUM	0.500		0.486	mg/L	97	
CCV	Q100387	INORGANIC	BERYLLIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q969897	SPEX	BERYLLIUM	0.500		0.447	mg/L	89	
BLA02	Q969898	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BERYLLIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	BERYLLIUM	0.010		0.00961	mg/L	96	
ICS-A	Q100395	PERKIN ELM	BERYLLIUM	0.500		0.480	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	CADMIUM	0.400		0.412	mg/L	103	
DUP02	Q969901	A320969	CADMIUM	1.28		1.29	mg/kg		1
SPI02	Q969899	A320969	CADMIUM	1.28	5.00	6.13	mg/kg	97	
CDL01	Q100411	INORGANIC	CADMIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	
CCV	Q100387	INORGANIC	CADMIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	CADMIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	CADMIUM	.5		0.474	mg/L	95	
BLA02	Q969903	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CADMIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	CADMIUM	0.010		0.0124	mg/L	124	
ICS-A	Q100395	PERKIN ELM	CADMIUM	1.00		0.934	mg/L	93	

CALCIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	CALCIUM	100		97.3	mg/L	97	
DUP02	Q969901	A320969	CALCIUM	17100		17400	mg/kg		2
SPI02	Q969899	A320969	CALCIUM	17100	10000	24900	mg/kg	78	
ICS-A	Q100410	PERKIN ELM	CALCIUM	500		460.	mg/L	92	
CCV	Q100387	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q100386	NA	CALCIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	CALCIUM	100		87.0	mg/L	87	
BLA02	Q969898	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100384	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	CALCIUM	500		456.	mg/L	91	

CHROMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100417	PERKIN ELM	CHROMIUM	0.400		0.405	mg/L	101	
DUP02	Q969901	A320969	CHROMIUM	22.4		22.6	mg/kg		1
SPI02	Q969899	A320969	CHROMIUM	22.4	20.0	41.6	mg/kg	96	
CDL01	Q100411	INORGANIC	CHROMIUM	10		9.93	mg/L	99	
ICS-A	Q100410	PERKIN ELM	CHROMIUM	0.500		0.487	mg/L	97	
CCV	Q100387	INORGANIC	CHROMIUM	5.00		5.08	mg/L	102	
BLA01	Q100386	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	CHROMIUM	2.00		1.79	mg/L	90	
BLA02	Q969898	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100384	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	CHROMIUM	0.020		0.0180	mg/L	90	
ICS-A	Q100395	PERKIN ELM	CHROMIUM	0.500		0.483	mg/L	97	

COBALT ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COBALT	0.400		0.407	mg/L	102	
DUP02	Q969901	A320969	COBALT	8.92		9.09	mg/kg		2
SPI02	Q969899	A320969	COBALT	8.92	50.0	56.8	mg/kg	96	
CDL01	Q100411	INORGANIC	COBALT	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COBALT	0.500		0.471	mg/L	94	
CCV	Q100387	INORGANIC	COBALT	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	COBALT			< 0.004	mg/L		
LCS	Q969897	SPEX	COBALT	5.00		4.42	mg/L	88	
BLA02	Q969898	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COBALT	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	COBALT			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	COBALT	0.100		0.0926	mg/L	93	
ICS-A	Q100395	PERKIN ELM	COBALT	0.500		0.465	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COPPER	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	COPPER	16.0		15.8	mg/kg		1
SPI02	Q969899	A320969	COPPER	16.0	25.0	40.9	mg/kg	100	
CDL01	Q100411	INORGANIC	COPPER	10		9.90	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100387	INORGANIC	COPPER	5.00		5.15	mg/L	103	
BLA01	Q100386	NA	COPPER			< 0.008	mg/L		
LCS	Q969897	SPEX	COPPER	2.50		2.25	mg/L	90	
BLA02	Q969898	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COPPER	5.00		5.14	mg/L	103	
BLA01	Q100384	NA	COPPER			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	COPPER	0.050		0.0545	mg/L	109	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100395	PERKIN ELM	COPPER	0.500		0.438	mg/L	88	

IRON ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	IRON	0.400		0.390	mg/L	98	
DUP02	Q969901	A320969	IRON	21500		21400	mg/kg		1
CDL01	Q100411	INORGANIC	IRON	10		9.79	mg/L	98	
ICS-A	Q100410	PERKIN ELM	IRON	200		184.	mg/L	92	
CCV	Q100387	INORGANIC	IRON	5.00		5.18	mg/L	104	
BLA01	Q100386	NA	IRON			< 0.01	mg/L		
LCS	Q969897	SPEX	IRON	10.0		9.02	mg/L	90	
BLA02	Q969898	NA	IRON			.0575	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	IRON	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	IRON			< 0.01	mg/L		
ICS-A	Q100395	PERKIN ELM	IRON	200		180.	mg/L	90	

MAGNESIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	MAGNESIUM	100		98.1	mg/L	98	
DUP02	Q969901	A320969	MAGNESIUM	9340		9830	mg/kg		5
SPI02	Q969899	A320969	MAGNESIUM	9340	10000	18200	mg/kg	89	
ICS-A	Q100410	PERKIN ELM	MAGNESIUM	500		476.	mg/L	95	
CCV	Q100387	INORGANIC	MAGNESIUM	50.0		50.6	mg/L	101	
BLA01	Q100386	NA	MAGNESIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	MAGNESIUM	100		86.1	mg/L	86	
BLA02	Q969898	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MAGNESIUM	50.0		50.4	mg/L	101	
BLA01	Q100384	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	MAGNESIUM	500		474.	mg/L	95	

MANGANESE ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	MANGANESE	0.400		0.400	mg/L	100	
DUP02	Q969901	A320969	MANGANESE	407.		393.	mg/kg		4
CDL01	Q100411	INORGANIC	MANGANESE	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	Q100387	INORGANIC	MANGANESE	5.00		5.06	mg/L	101	
BLA01	Q100386	NA	MANGANESE			< 0.004	mg/L		
LCS	Q969897	SPEX	MANGANESE	5.00		4.40	mg/L	88	
BLA02	Q969898	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MANGANESE	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	MANGANESE	0.030		0.0277	mg/L	92	
ICS-A	Q100395	PERKIN ELM	MANGANESE	0.500		0.486	mg/L	97	

NICKEL ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100417	PERKIN ELM	NICKEL	0.400		0.406	mg/L	102	
DUP02	Q969901	A320969	NICKEL	24.6		25.9	mg/kg		5
SP102	Q969899	A320969	NICKEL	24.6	50.0	71.0	mg/kg	93	
CDL01	Q100411	INORGANIC	NICKEL	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	
CCV	Q100387	INORGANIC	NICKEL	5.00		5.02	mg/L	100	
BLA01	Q100386	NA	NICKEL			< 0.004	mg/L		
LCS	Q969897	SPEX	NICKEL	5.00		4.40	mg/L	88	
BLA02	Q969898	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	NICKEL	5.00		5.01	mg/L	100	
BLA01	Q100384	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	NICKEL	0.080		0.0761	mg/L	95	
ICS-A	Q100395	PERKIN ELM	NICKEL	1.00		0.912	mg/L	91	

POTASSIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: N126.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102271	PERKIN ELM	POTASSIUM	20.0		19.8	mg/L	99	
ICV01	Q102270	SPEX	POTASSIUM	100		98.2	mg/L	98	
DUP02	Q991343	A320969	POTASSIUM	1940		1430	mg/kg		30
SP102	Q991341	A320969	POTASSIUM	1940	10000	10200	mg/kg	83	
CCV	Q102245	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q102244	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991339	SPEX	POTASSIUM	100		89.3	mg/L	89	
BLA02	Q991340	NA	POTASSIUM			.304	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q102243	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q102242	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP02	Q969901	A320969	SILVER	0		BDL	mg/kg		
SP102	Q969899	A320969	SILVER	.74	5	6.47	mg/kg	115	
CDL01	Q100411	INORGANIC	SILVER	2		1.98	mg/L	99	
ICS-A	Q100410	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	
CCV	Q100387	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100386	NA	SILVER			< 0.004	mg/L		
LCS	Q969897	SPEX	SILVER	0.500		0.429	mg/L	86	
BLA02	Q969898	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100384	NA	SILVER			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	SILVER	0.020		0.0249	mg/L	125	
ICS-A	Q100395	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

SODIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N131.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SODIUM	2		1.98	mg/L	99	
ICV01	Q100414	SPEX	SODIUM	100		101.	mg/L	101	
DUP02	Q969901	A320969	SODIUM	134.		128.	mg/kg		5
SPI02	Q969899	A320969	SODIUM	134.	10000	9510	mg/kg	94	
CCV	Q100387	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100386	NA	SODIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	SODIUM	100		89.9	mg/L	90	
BLA02	Q969898	NA	SODIUM			.776	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100384	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N138.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	VANADIUM	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	VANADIUM	20.1		18.7	mg/kg		7
SPI02	Q969899	A320969	VANADIUM	20.1	50.0	68.0	mg/kg	96	
CDL01	Q100411	INORGANIC	VANADIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	VANADIUM	0.500		0.479	mg/L	96	
CCV	Q100387	INORGANIC	VANADIUM	5.00		5.10	mg/L	102	
BLA01	Q100386	NA	VANADIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	VANADIUM	5.00		4.65	mg/L	89	
BLA02	Q969898	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	VANADIUM	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	VANADIUM	0.100		0.0955	mg/L	96	
ICS-A	Q100395	PERKIN ELM	VANADIUM	0.500		0.474	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	ZINC	0.400		0.400	mg/L	100	
DUP02	Q969901	A320969	ZINC	145.		150.	mg/kg		3
SPI02	Q969899	A320969	ZINC	145.	50.0	190.	mg/kg	90	
CDL01	Q100411	INORGANIC	ZINC	10		9.82	mg/L	98	
ICS-A	Q100410	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100387	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	ZINC			< 0.008	mg/L		
LCS	Q969897	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	Q969898	NA	ZINC			.0296	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	ZINC			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	ZINC	0.040		0.0432	mg/L	108	
ICS-A	Q100395	PERKIN ELM	ZINC	1.00		0.998	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q108180	PERKIN-ELM	ARSENIC	.04		0.0367	mg/L	92
DUP02	Q969901	A320969	ARSENIC	0		BDL	mg/kg	
SP102	Q969899	A320969	ARSENIC	0	200	187.	mg/kg	94
CDL01	Q108172	INORGANIC	ARSENIC	.5		0.501	mg/L	100
CCV	Q108164	INORGANIC	ARSENIC	.1		0.0969	mg/L	97
BLA01	Q108165	NA	ARSENIC			< 0.002	mg/L	
LCS	Q969902	INORGANIC	ARSENIC	.5		0.469	mg/L	94
BLA02	Q969903	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A320971		See Certificate of Analysis					
CCV	Q108191	INORGANIC	ARSENIC	.1		0.0965	mg/L	97
BLA01	Q108190	NA	ARSENIC			< 0.002	mg/L	
CDL01	Q108161	PERKIN-ELM	ARSENIC	.02		0.0174	mg/L	87

SELENIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	SELENIUM	.04		0.0425	mg/L	106	
DUP02	Q969901	A320969	SELENIUM	0		BDL	mg/kg		
SP102	Q969899	A320969	SELENIUM	0	200	199.	mg/kg	100	
CDL01	Q108172	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q108164	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q108165	NA	SELENIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	SELENIUM	.5		0.463	mg/L	93	
BLA02	Q969903	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q108191	INORGANIC	SELENIUM	.1		0.0983	mg/L	98	
BLA01	Q108190	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	THALLIUM	.04		0.0419	mg/L	105	
DUP02	Q969901	A320969	THALLIUM	0		BDL	mg/kg		
SP102	Q969899	A320969	THALLIUM	0	300	278.	mg/kg	93	
CDL01	Q108172	INORGANIC	THALLIUM	.5		0.499	mg/L	100	
CCV	Q108164	INORGANIC	THALLIUM	.1		0.0974	mg/L	97	
BLA01	Q108165	NA	THALLIUM			< 0.004	mg/L		
LCS	Q969902	INORGANIC	THALLIUM	.5		0.479	mg/L	96	
BLA02	Q969903	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q108191	INORGANIC	THALLIUM	.1		0.0986	mg/L	99	
BLA01	Q108190	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q108161	PERKIN-ELM	THALLIUM	.02		0.0228	mg/L	114	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	LEAD	.04		0.0388	mg/L	97	
DUP02	Q969901	A320969	LEAD	27.7		30.1	mg/kg		8
SPI02	Q969899	A320969	LEAD	27.7	50.0	73.3	mg/kg	91	
CDL01	Q108172	INORGANIC	LEAD	.5		0.502	mg/L	100	
ICS-A	Q108168	PERKIN ELM	LEAD	1		0.877	mg/L	88	
CCV	Q108164	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108165	NA	LEAD			< 0.002	mg/L		
LCS	Q969902	INORGANIC	LEAD	.5		0.481	mg/L	96	
BLA02	Q969903	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q108191	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108190	NA	LEAD			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	LEAD	.006		0.00561	mg/L	94	
ICS-A	Q108162	PERKIN ELM	LEAD	1		0.849	mg/L	85	

MERCURY CVAA SW846-7471(MOD)

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	Q997707	A320969	MERCURY	0		BDL	mg/kg		
SPI02	Q997705	A320969	MERCURY	0	.25	.246	mg/kg	98.4	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101482		MERCURY	.003		.00283	mg/L	94.3	
BLA01	Q101483		MERCURY			< .00008	mg/L		
LCS	Q997703		MERCURY	.003		.00265	mg/L	88.3	
BLA02	Q997704		MERCURY			< .00008	mg/L		
SAMPLE	A320971		See Certificate of Analysis						
CCV	Q101484		MERCURY	.003		.00271	mg/L	90.3	
BLA01	Q101485		MERCURY			< .00008	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: R. SHAMP Review Date: 16-SEP-94 File ID: >7844C Run: R230149

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106487	A321023	1,1-DICHLOROETHENE	0	50	44.1	ug/kg	88.2	
SPI01	Q106487	A321023	TRICHLOROETHENE	0	50	43.3	ug/kg	86.6	
SPI01	Q106487	A321023	BENZENE	0	50	46.4	ug/kg	92.8	
SPI01	Q106487	A321023	TOLUENE	0	50	47.5	ug/kg	95	
SPI01	Q106487	A321023	CHLOROBENZENE	0	50	41.6	ug/kg	83.2	
DPS01	Q106488	A321023	1,1-DICHLOROETHENE	0	50	43.6	ug/L	87.2	1.1
DPS01	Q106488	A321023	TRICHLOROETHENE	0	50	43.6	ug/L	87.2	.7
DPS01	Q106488	A321023	BENZENE	0	50	46.4	ug/L	92.8	0
DPS01	Q106488	A321023	TOLUENE	0	50	51	ug/L	102	7.1
DPS01	Q106488	A321023	CHLOROBENZENE	0	50	43.8	ug/L	87.6	6.6
CCV	Q106485		See Attached Report g7840c.ind						
BLA01	Q106486		See Attached Report g7841c.ind						
SAMPLE	A320971		See Certificate of Analysis						

Comments

Q106487 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

Comments

Q106488 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 14-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: J. MINNIEAR, II Review Date: 16-SEP-94 File ID: >09178 Run: R230148

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI02	Q102479	A321022	PHENOL	0	3300	2330	ug/kg	70.6	
SPI02	Q102479	A321022	2-CHLOROPHENOL	0	3300	2370	ug/kg	71.8	
SPI02	Q102479	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2160	ug/kg	65.5	
SPI02	Q102479	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPI02	Q102479	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2100	ug/kg	63.6	
SPI02	Q102479	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2160	ug/kg	65.5	
SPI02	Q102479	A321022	ACENAPHTHENE	0	3300	2190	ug/kg	66.4	
SPI02	Q102479	A321022	4-NITROPHENOL	0	3300	1900	ug/kg	57.6	
SPI02	Q102479	A321022	2,4-DINITROTOLUENE	0	3300	2270	ug/kg	68.8	
SPI02	Q102479	A321022	PENTACHLOROPHENOL	0	3300	1090	ug/kg	33	
SPI02	Q102479	A321022	PYRENE	0	3300	2130	ug/kg	64.5	
DPS02	Q102481	A321022	PHENOL	0	3300	2220	ug/kg	67.3	4.8
DPS02	Q102481	A321022	2-CHLOROPHENOL	0	3300	2520	ug/kg	76.4	6.2
DPS02	Q102481	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2370	ug/kg	71.8	9.2
DPS02	Q102481	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2310	ug/kg	70	5.3
DPS02	Q102481	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2250	ug/kg	68.2	7
DPS02	Q102481	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2360	ug/kg	71.5	8.8
DPS02	Q102481	A321022	ACENAPHTHENE	0	3300	2440	ug/kg	73.9	10.7
DPS02	Q102481	A321022	4-NITROPHENOL	0	3300	2010	ug/kg	60.9	5.6
DPS02	Q102481	A321022	2,4-DINITROTOLUENE	0	3300	2360	ug/kg	71.5	3.8
DPS02	Q102481	A321022	PENTACHLOROPHENOL	0	3300	1200	ug/kg	36.4	0.8
DPS02	Q102481	A321022	PYRENE	0	3300	2410	ug/kg	73	
CCV	Q106439		See Attached Report g0916b.ind						
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320971		See Certificate of Analysis						
LCS	Q102476	HLI	ACENAPHTHENE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	ACENAPHTHYLENE	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	ANTHRACENE	3300		1290	ug/kg	39.1	
LCS	Q102476	HLI	BENZO(A)PYRENE	3300		1340	ug/kg	40.6	
LCS	Q102476	HLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	BENZO(K)FLUORANTHENE	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	3300		1700	ug/kg	51.5	
LCS	Q102476	HLI	BIS(2-CHLOROETHOXY)METHANE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	BIS(2-CHLOROETHYL)ETHER	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	BIS(2-CHLOROISOPROPYL)ETHER	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	4-BROMODIPHENYL ETHER	3300		* 1500	ug/kg	45.5	
LCS	Q102476	HLI	CARBAZOLE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-CHLOROANILINE	3300		1170	ug/kg	35.5	
LCS	Q102476	HLI	2-CHLORONAPHTHALENE	3300		3110	ug/kg	94.2	
LCS	Q102476	HLI	4-CHLOROPHENYL-PHENYLETHER	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	CHRYSENE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	DIBENZ(A,H)ANTHRACENE	3300		1370	ug/kg	41.5	
LCS	Q102476	HLI	DIBENZOFURAN	3300		1630	ug/kg	49.4	
LCS	Q102476	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3,3'-DICHLOROBENZIDINE	3300		1280	ug/kg	38.8	
LCS	Q102476	HLI	DIETHYLPHTHALATE	3300		1480	ug/kg	44.8	
LCS	Q102476	HLI	DIMETHYLPHTHALATE	3300		1640	ug/kg	49.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q102476	HLI	DI-N-BUTYLPHTHALATE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	2,4-DINITROTOLUENE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	2,6-DINITROTOLUENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	DI-N-OCTYLPHTHALATE	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	FLUORANTHENE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	FLUORENE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	HEXACHLOROBENZENE	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	HEXACHLOROBUTADIENE	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	HEXACHLOROCYCLOPENTADIENE	3300		1380	ug/kg	41.8	
LCS	Q102476	HLI	HEXACHLOROETHANE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	INDENO(1,2,3-CD)PYRENE	3300		1140	ug/kg	34.5	
LCS	Q102476	HLI	ISOPHORONE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-METHYLNAPHTHALENE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	NAPHTHALENE	3300		1610	ug/kg	48.8	
LCS	Q102476	HLI	2-NITROANILINE (O-NITROANILINE)	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3-NITROANILINE (M-NITROANILINE)	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-NITROANILINE (P-NITROANILINE)	3300		1330	ug/kg	40.3	
LCS	Q102476	HLI	NITROBENZENE	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	N-NITROSODIPHENYLAMINE	6600		2920	ug/kg	44.2	
LCS	Q102476	HLI	N-NITROSO-DI-N-PROPYLAMINE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	PHENANTHRENE	3300		* 1450	ug/kg	43.9	
LCS	Q102476	HLI	PYRENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	1,2,4-TRICHLOROBENZENE	3300		1500	ug/kg	45.5	
LCS	Q102476	HLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-CHLOROPHENOL	3300		1550	ug/kg	47	
LCS	Q102476	HLI	2,4-DICHLOROPHENOL	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2,4-DIMETHYLPHENOL	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	2,4-DINITROPHENOL	3300		729	ug/kg	22.1	
LCS	Q102476	HLI	2-METHYLPHENOL (O-CRESOL)	3300		1550	ug/kg	47	
LCS	Q102476	HLI	4-METHYLPHENOL (P-CRESOL)	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2-NITROPHENOL	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	4-NITROPHENOL	3300		1110	ug/kg	33.6	
LCS	Q102476	HLI	PENTACHLOROPHENOL	3300		776	ug/kg	23.5	
LCS	Q102476	HLI	PHENOL	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	2,4,5-TRICHLOROPHENOL	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	2,4,6-TRICHLOROPHENOL	3300		1490	ug/kg	45.2	

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 22-SEP-94 File ID: 5418 Run: R230887

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320971		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: HABuck

QUALITY ASSURANCE REPORT

Service Location	Received	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, INC. COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8305	01-SEP-94	A320972
	Complete	PO Number
	27-SEP-94	5369-50
	Printed	Sampled
	29-SEP-94	30-AUG-94 16:00

Sample Description

SAMPLE I.D.: D-083094-KJJ-113
PROJECT: FOUR COUNTY LANDFILL

TOTAL ORGANIC CARBON SW846-9060

Analyst : S. PFEFFER — Analysis Date: 12-SEP-94 — Instrument: TOC — Test: G401.0.0
Reviewer: B. SHRAKE — Review Date: 13-SEP-94 — File ID: 2072-2073 — Run: R229693

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q103622		TOTAL ORGANIC CARBON (TOC)	46.2		42.8	mg/L	92.6	
ICV01	Q103635		TOTAL ORGANIC CARBON (TOC)	46.2		45.6	mg/L	98.7	
SPI01	Q103627	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2090	mg/kg	104.5	
DPS01	Q103628	A320972	TOTAL ORGANIC CARBON (TOC)	0	2000	2110	mg/kg	105.5	1
BLA01	Q103620		TOTAL ORGANIC CARBON (TOC)			-.146	mg/L		
CDL01	Q103621		TOTAL ORGANIC CARBON (TOC)	10		9.13	mg/L	91.3	
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q103630		TOTAL ORGANIC CARBON (TOC)	50		50.6	mg/L	101.2	
BLA01	Q103631		TOTAL ORGANIC CARBON (TOC)			-.539	mg/L		

TOTAL SOLIDS EPA 160.3

Analyst : B. HAUK — Analysis Date: 02-SEP-94 — Test: G401.7.0
Reviewer: B. PRIDEMORE — Review Date: 03-SEP-94 — File ID: 4158-4160 — Run: R228859

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
DUP01	Q998489	A320969	SOLIDS	84		79	Percent		6.1
LCS01	Q998487		SOLIDS	9.997		9.9976	Grams	100	
SAMPLE	A320972		See Certificate of Analysis						
LCS01	Q998490		SOLIDS	8.6872		8.6858	Grams	100	

CYANIDE, TOTAL (AUTOMATED) SW846-9012

Analyst : J. STOAKES — Analysis Date: 06-SEP-94 — Instrument: AUTO-ANALYZER — Test: G101.4.0
Reviewer: P. ANDERSON — Review Date: 07-SEP-94 — File ID: — Run: R229048

Prep: CYANIDE DISTILLATION SW846-9010A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q999805		CYANIDE	.205		.198	mg/L	96.6	
ICV01	Q999823		CYANIDE	.205		.202	mg/L	98.5	
DUP02	Q999807	A320790	CYANIDE	0		BDL	mg/L		
SPI02	Q999808	A320792	CYANIDE	0	.1	.085	mg/L	85	
CDL01	Q999804		CYANIDE	.005		.0038	mg/L	76	
CCV	Q999809		CYANIDE	.1		.101	mg/L	101	
BLA01	Q999810		CYANIDE			0	mg/L		
BLA02	Q999806		CYANIDE			0	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q999819		CYANIDE	.1		.098	mg/L	98	
BLA01	Q999820		CYANIDE			-.001	mg/L		
LFB02	Q999822		CYANIDE	.3		.278	mg/L	92.7	

ALUMINUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M101.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100415	PERKIN ELM	ALUMINUM	2.00		1.99	mg/L	100	
DUP02	Q969901	A320969	ALUMINUM	11300		10100	mg/kg		11
CDL01	Q100411	INORGANIC	ALUMINUM	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	ALUMINUM	500		486.	mg/L	97	
CCV	Q100387	INORGANIC	ALUMINUM	5.00		5.32	mg/L	106	
BLA01	Q100386	NA	ALUMINUM			< 0.02	mg/L		
LCS	Q969897	SPEX	ALUMINUM	20.0		18.0	mg/L	90	
BLA02	Q969898	NA	ALUMINUM			.117	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ALUMINUM	5.00		5.26	mg/L	105	
BLA01	Q100384	NA	ALUMINUM			< 0.02	mg/L		
ICS-A	Q100395	PERKIN ELM	ALUMINUM	500		488.	mg/L	98	

ANTIMONY ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: M102.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102273	PERKIN ELM	ANTIMONY	0.400		0.385	mg/L	96	
DUP02	Q991343	A320969	ANTIMONY	6.73		5.40	mg/kg		22
SPI02	Q991341	A320969	ANTIMONY	6.73	50	32.7	mg/kg	52	
CDL01	Q102268	PERKIN ELM	ANTIMONY	0.120		0.118	mg/L	98	
CCV	Q102265	INORGANIC	ANTIMONY	1.00		1.01	mg/L	101	
BLA01	Q102244	NA	ANTIMONY			< 0.012	mg/L		
LCS	Q991339	SPEX	ANTIMONY	5.00		4.62	mg/L	92	
BLA02	Q991340	NA	ANTIMONY			< 0.012	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q102243	INORGANIC	ANTIMONY	1.00		0.997	mg/L	100	
BLA01	Q102242	NA	ANTIMONY			< 0.012	mg/L		
CDL01	Q102241	PERKIN ELM	ANTIMONY	0.120		0.122	mg/L	102	

BARIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M104.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	BARIUM	2.00		2.05	mg/L	103	
DUP02	Q969901	A320969	BARIUM	49.7		46.9	mg/kg		6
SPI02	Q969899	A320969	BARIUM	49.7	200	248.	mg/kg	99	
CDL01	Q100411	INORGANIC	BARIUM	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BARIUM	0.500		0.504	mg/L	101	
CCV	Q100387	INORGANIC	BARIUM	5.00		5.12	mg/L	102	
BLA01	Q100386	NA	BARIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	BARIUM	20.0		18.2	mg/L	91	
BLA02	Q969898	NA	BARIUM			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BARIUM	5.00		5.11	mg/L	102	
BLA01	Q100384	NA	BARIUM			< 0.004	mg/L		
ICS-A	Q100395	PERKIN ELM	BARIUM	0.500		0.496	mg/L	99	

BERYLLIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M105.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	BERYLLIUM	0.400		0.395	mg/L	99	
DUP02	Q969901	A320969	BERYLLIUM	0.663		0.503	mg/kg		27
SPI02	Q969899	A320969	BERYLLIUM	0.663	5.00	5.35	mg/kg	94	
CDL01	Q100411	INORGANIC	BERYLLIUM	10		9.88	mg/L	99	
ICS-A	Q100410	PERKIN ELM	BERYLLIUM	0.500		0.486	mg/L	97	
CCV	Q100387	INORGANIC	BERYLLIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	BERYLLIUM			< 0.002	mg/L		
LCS	Q969897	SPEX	BERYLLIUM	0.500		0.447	mg/L	89	
BLA02	Q969898	NA	BERYLLIUM			< 0.002	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	BERYLLIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	BERYLLIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	BERYLLIUM	0.010		0.00961	mg/L	96	
ICS-A	Q100395	PERKIN ELM	BERYLLIUM	0.500		0.480	mg/L	96	

CADMIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M108.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	CADMIUM	0.400		0.412	mg/L	103	
DUP02	Q969901	A320969	CADMIUM	1.28		1.29	mg/kg		1
SPI02	Q969899	A320969	CADMIUM	1.28	5.00	6.13	mg/kg	97	
CDL01	Q100411	INORGANIC	CADMIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	CADMIUM	1.00		0.944	mg/L	94	
CCV	Q100387	INORGANIC	CADMIUM	5.00		5.04	mg/L	101	
BLA01	Q100386	NA	CADMIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	CADMIUM	.5		0.474	mg/L	95	
BLA02	Q969903	NA	CADMIUM			< 0.0004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CADMIUM	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	CADMIUM			< 0.002	mg/L		
CDL01	Q100396	PERKIN ELM	CADMIUM	0.010		0.0124	mg/L	124	
ICS-A	Q100395	PERKIN ELM	CADMIUM	1.00		0.934	mg/L	93	

CALCIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M109.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	CALCIUM	100		97.3	mg/L	97	
DUP02	Q969901	A320969	CALCIUM	17100		17400	mg/kg		2
SPI02	Q969899	A320969	CALCIUM	17100	10000	24900	mg/kg	78	
ICS-A	Q100410	PERKIN ELM	CALCIUM	500		460.	mg/L	92	
CCV	Q100387	INORGANIC	CALCIUM	50.0		50.3	mg/L	101	
BLA01	Q100386	NA	CALCIUM			< 0.08	mg/L		
LCS	Q969897	SPEX	CALCIUM	100		87.0	mg/L	87	
BLA02	Q969898	NA	CALCIUM			< 0.08	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CALCIUM	50.0		50.0	mg/L	100	
BLA01	Q100384	NA	CALCIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	CALCIUM	500		456.	mg/L	91	

CHROMIUM ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M110.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	
ICV01	Q100417	PERKIN ELM	CHROMIUM	0.400		0.405	mg/L	101	
DUP02	Q969901	A320969	CHROMIUM	22.4		22.6	mg/kg		1
SPI02	Q969899	A320969	CHROMIUM	22.4	20.0	41.6	mg/kg	96	
CDL01	Q100411	INORGANIC	CHROMIUM	10		9.93	mg/L	99	
ICS-A	Q100410	PERKIN ELM	CHROMIUM	0.500		0.487	mg/L	97	
CCV	Q100387	INORGANIC	CHROMIUM	5.00		5.08	mg/L	102	
BLA01	Q100386	NA	CHROMIUM			< 0.004	mg/L		
LCS	Q969897	SPEX	CHROMIUM	2.00		1.79	mg/L	90	
BLA02	Q969898	NA	CHROMIUM			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	CHROMIUM	5.00		5.07	mg/L	101	
BLA01	Q100384	NA	CHROMIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	CHROMIUM	0.020		0.0180	mg/L	90	
ICS-A	Q100395	PERKIN ELM	CHROMIUM	0.500		0.483	mg/L	97	

COBALT ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M111.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COBALT	0.400		0.407	mg/L	102	
DUP02	Q969901	A320969	COBALT	8.92		9.09	mg/kg		2
SPI02	Q969899	A320969	COBALT	8.92	50.0	56.8	mg/kg	96	
CDL01	Q100411	INORGANIC	COBALT	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COBALT	0.500		0.471	mg/L	94	
CCV	Q100387	INORGANIC	COBALT	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	COBALT			< 0.004	mg/L		
LCS	Q969897	SPEX	COBALT	5.00		4.42	mg/L	88	
BLA02	Q969898	NA	COBALT			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COBALT	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	COBALT			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	COBALT	0.100		0.0926	mg/L	93	
ICS-A	Q100395	PERKIN ELM	COBALT	0.500		0.465	mg/L	93	

COPPER ICP SW846-6010A

Analyst : A. HILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M112.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	COPPER	0.400		0.404	mg/L	101	
DUP02	Q969901	A320969	COPPER	16.0		15.8	mg/kg		1
SPI02	Q969899	A320969	COPPER	16.0	25.0	40.9	mg/kg	100	
CDL01	Q100411	INORGANIC	COPPER	10		9.90	mg/L	99	
ICS-A	Q100410	PERKIN ELM	COPPER	0.500		0.512	mg/L	102	
CCV	Q100387	INORGANIC	COPPER	5.00		5.15	mg/L	103	
BLA01	Q100386	NA	COPPER			< 0.008	mg/L		
LCS	Q969897	SPEX	COPPER	2.50		2.25	mg/L	90	
BLA02	Q969898	NA	COPPER			< 0.008	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	COPPER	5.00		5.14	mg/L	103	
BLA01	Q100384	NA	COPPER			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	COPPER	0.050		0.0545	mg/L	109	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICS-A	Q100395	PERKIN ELM	COPPER	0.500		0.438	mg/L	88	

IRON ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M115.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	IRON	0.400		0.390	mg/L	98	
DUP02	0969901	A320969	IRON	21500		21400	mg/kg		1
CDL01	Q100411	INORGANIC	IRON	10		9.79	mg/L	98	
ICS-A	Q100410	PERKIN ELM	IRON	200		184.	mg/L	92	
CCV	Q100387	INORGANIC	IRON	5.00		5.18	mg/L	104	
BLA01	Q100386	NA	IRON			< 0.01	mg/L		
LCS	0969897	SPEX	IRON	10.0		9.02	mg/L	90	
BLA02	0969898	NA	IRON			.0575	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	IRON	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	IRON			< 0.01	mg/L		
ICS-A	Q100395	PERKIN ELM	IRON	200		180.	mg/L	90	

MAGNESIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M118.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100414	SPEX	MAGNESIUM	100		98.1	mg/L	98	
DUP02	0969901	A320969	MAGNESIUM	9340		9830	mg/kg		5
SPI02	0969899	A320969	MAGNESIUM	9340	10000	18200	mg/kg	89	
ICS-A	Q100410	PERKIN ELM	MAGNESIUM	500		476.	mg/L	95	
CCV	Q100387	INORGANIC	MAGNESIUM	50.0		50.6	mg/L	101	
BLA01	Q100386	NA	MAGNESIUM			< 0.08	mg/L		
LCS	0969897	SPEX	MAGNESIUM	100		86.1	mg/L	86	
BLA02	0969898	NA	MAGNESIUM			< 0.08	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MAGNESIUM	50.0		50.4	mg/L	101	
BLA01	Q100384	NA	MAGNESIUM			< 0.08	mg/L		
ICS-A	Q100395	PERKIN ELM	MAGNESIUM	500		474.	mg/L	95	

MANGANESE ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M119.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	MANGANESE	0.400		0.400	mg/L	100	
DUP02	0969901	A320969	MANGANESE	407.		393.	mg/kg		4
CDL01	Q100411	INORGANIC	MANGANESE	10		9.92	mg/L	99	
ICS-A	Q100410	PERKIN ELM	MANGANESE	0.500		0.495	mg/L	99	
CCV	Q100387	INORGANIC	MANGANESE	5.00		5.06	mg/L	101	
BLA01	Q100386	NA	MANGANESE			< 0.004	mg/L		
LCS	0969897	SPEX	MANGANESE	5.00		4.40	mg/L	88	
BLA02	0969898	NA	MANGANESE			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	MANGANESE	5.00		5.04	mg/L	101	
BLA01	Q100384	NA	MANGANESE			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	MANGANESE	0.030		0.0277	mg/L	92	
ICS-A	Q100395	PERKIN ELM	MANGANESE	0.500		0.486	mg/L	97	

NICKEL ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N122.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	NICKEL	0.400		0.406	mg/L	102	
DUP02	Q969901	A320969	NICKEL	24.6		25.9	mg/kg		5
SPI02	Q969899	A320969	NICKEL	24.6	50.0	71.0	mg/kg	93	
CDL01	Q100411	INORGANIC	NICKEL	10		9.91	mg/L	99	
ICS-A	Q100410	PERKIN ELM	NICKEL	1.00		0.924	mg/L	92	
CCV	Q100387	INORGANIC	NICKEL	5.00		5.02	mg/L	100	
BLA01	Q100386	NA	NICKEL			< 0.004	mg/L		
LCS	Q969897	SPEX	NICKEL	5.00		4.40	mg/L	88	
BLA02	Q969898	NA	NICKEL			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	NICKEL	5.00		5.01	mg/L	100	
BLA01	Q100384	NA	NICKEL			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	NICKEL	0.080		0.0761	mg/L	95	
ICS-A	Q100395	PERKIN ELM	NICKEL	1.00		0.912	mg/L	91	

POTASSIUM ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 09-SEP-94 Instrument: ICP Test: N126.3.0
Reviewer: S. ENDERSEN Review Date: 12-SEP-94 File ID: Run: R229473

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q102271	PERKIN ELM	POTASSIUM	20.0		19.8	mg/L	99	
ICV01	Q102270	SPEX	POTASSIUM	100		98.2	mg/L	98	
DUP02	Q991343	A320969	POTASSIUM	1940		1430	mg/kg		30
SPI02	Q991341	A320969	POTASSIUM	1940	10000	10200	mg/kg	83	
CCV	Q102245	INORGANIC	POTASSIUM	50.0		48.8	mg/L	98	
BLA01	Q102244	NA	POTASSIUM			< 0.08	mg/L		
LCS	Q991339	SPEX	POTASSIUM	100		89.3	mg/L	89	
BLA02	Q991340	NA	POTASSIUM			.304	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q102243	INORGANIC	POTASSIUM	50.0		48.3	mg/L	97	
BLA01	Q102242	NA	POTASSIUM			< 0.08	mg/L		

SILVER ICP SW846-6010A

Analyst : A. NILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: N130.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SILVER	2.00		2.00	mg/L	100	
DUP02	Q969901	A320969	SILVER	0		BDL	mg/kg		
SPI02	Q969899	A320969	SILVER	.74	5	6.47	mg/kg	115	
CDL01	Q100411	INORGANIC	SILVER	2		1.98	mg/L	99	
ICS-A	Q100410	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	
CCV	Q100387	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100386	NA	SILVER			< 0.004	mg/L		
LCS	Q969897	SPEX	SILVER	0.500		0.429	mg/L	86	
BLA02	Q969898	NA	SILVER			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SILVER	1.00		1.03	mg/L	103	
BLA01	Q100384	NA	SILVER			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	SILVER	0.020		0.0249	mg/L	125	
ICS-A	Q100395	PERKIN ELM	SILVER	1.00		1.01	mg/L	101	

SODIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M131.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100415	PERKIN ELM	SODIUM	2		1.98	mg/L	99	
ICV01	Q100414	SPEX	SODIUM	100		101.	mg/L	101	
DUP02	0969901	A320969	SODIUM	134.		128.	mg/kg		5
SPI02	0969899	A320969	SODIUM	134.	10000	9510	mg/kg	94	
CCV	Q100387	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100386	NA	SODIUM			< 0.08	mg/L		
LCS	0969897	SPEX	SODIUM	100		89.9	mg/L	90	
BLA02	0969898	NA	SODIUM			.776	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	SODIUM	50		51.0	mg/L	102	
BLA01	Q100384	NA	SODIUM			< 0.08	mg/L		

VANADIUM ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M138.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	VANADIUM	0.400		0.404	mg/L	101	
DUP02	0969901	A320969	VANADIUM	20.1		18.7	mg/kg		7
SPI02	0969899	A320969	VANADIUM	20.1	50.0	68.0	mg/kg	96	
CDL01	Q100411	INORGANIC	VANADIUM	10		9.96	mg/L	100	
ICS-A	Q100410	PERKIN ELM	VANADIUM	0.500		0.479	mg/L	96	
CCV	Q100387	INORGANIC	VANADIUM	5.00		5.10	mg/L	102	
BLA01	Q100386	NA	VANADIUM			< 0.004	mg/L		
LCS	0969897	SPEX	VANADIUM	5.00		4.45	mg/L	89	
BLA02	0969898	NA	VANADIUM			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	VANADIUM	5.00		5.08	mg/L	102	
BLA01	Q100384	NA	VANADIUM			< 0.004	mg/L		
CDL01	Q100396	PERKIN ELM	VANADIUM	0.100		0.0955	mg/L	96	
ICS-A	Q100395	PERKIN ELM	VANADIUM	0.500		0.474	mg/L	95	

ZINC ICP SW846-6010A

Analyst : A. WILSCHER Analysis Date: 07-SEP-94 Instrument: ICP Test: M139.3.0
Reviewer: S. ENDERSEN Review Date: 08-SEP-94 File ID: Run: R229149

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100417	PERKIN ELM	ZINC	0.400		0.400	mg/L	100	
DUP02	0969901	A320969	ZINC	145.		150.	mg/kg		3
SPI02	0969899	A320969	ZINC	145.	50.0	190.	mg/kg	90	
CDL01	Q100411	INORGANIC	ZINC	10		9.82	mg/L	98	
ICS-A	Q100410	PERKIN ELM	ZINC	1.00		1.04	mg/L	104	
CCV	Q100387	INORGANIC	ZINC	5.00		5.05	mg/L	101	
BLA01	Q100386	NA	ZINC			< 0.008	mg/L		
LCS	0969897	SPEX	ZINC	5.00		4.35	mg/L	87	
BLA02	0969898	NA	ZINC			.0296	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q100385	INORGANIC	ZINC	5.00		5.03	mg/L	101	
BLA01	Q100384	NA	ZINC			< 0.008	mg/L		
CDL01	Q100396	PERKIN ELM	ZINC	0.040		0.0432	mg/L	108	
ICS-A	Q100395	PERKIN ELM	ZINC	1.00		0.998	mg/L	100	

ARSENIC TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M103.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec
ICV01	Q108180	PERKIN-ELM	ARSENIC	.04		0.0367	mg/L	92
DUP02	Q969901	A320969	ARSENIC	0		BDL	mg/kg	
SPI02	Q969899	A320969	ARSENIC	0	200	187.	mg/kg	94
CDL01	Q108172	INORGANIC	ARSENIC	.5		0.501	mg/L	100
CCV	Q108164	INORGANIC	ARSENIC	.1		0.0969	mg/L	97
BLA01	Q108165	NA	ARSENIC			< 0.002	mg/L	
LCS	Q969902	INORGANIC	ARSENIC	.5		0.469	mg/L	94
BLA02	Q969903	NA	ARSENIC			< 0.002	mg/L	
SAMPLE	A320972		See Certificate of Analysis					
CCV	Q108191	INORGANIC	ARSENIC	.1		0.0965	mg/L	97
BLA01	Q108190	NA	ARSENIC			< 0.002	mg/L	
CDL01	Q108161	PERKIN-ELM	ARSENIC	.02		0.0174	mg/L	87

SELENIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M128.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	SELENIUM	.04		0.0425	mg/L	106	
DUP02	Q969901	A320969	SELENIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	SELENIUM	0	200	199.	mg/kg	100	
CDL01	Q108172	INORGANIC	SELENIUM	.5		0.498	mg/L	100	
CCV	Q108164	INORGANIC	SELENIUM	.1		0.101	mg/L	101	
BLA01	Q108165	NA	SELENIUM			< 0.002	mg/L		
LCS	Q969902	INORGANIC	SELENIUM	.5		0.463	mg/L	93	
BLA02	Q969903	NA	SELENIUM			< 0.002	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q108191	INORGANIC	SELENIUM	.1		0.0983	mg/L	98	
BLA01	Q108190	NA	SELENIUM			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	SELENIUM	.01		0.0123	mg/L	123	

THALLIUM TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M134.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	THALLIUM	.04		0.0419	mg/L	105	
DUP02	Q969901	A320969	THALLIUM	0		BDL	mg/kg		
SPI02	Q969899	A320969	THALLIUM	0	300	278.	mg/kg	93	
CDL01	Q108172	INORGANIC	THALLIUM	.5		0.499	mg/L	100	
CCV	Q108164	INORGANIC	THALLIUM	.1		0.0974	mg/L	97	
BLA01	Q108165	NA	THALLIUM			< 0.004	mg/L		
LCS	Q969902	INORGANIC	THALLIUM	.5		0.479	mg/L	96	
BLA02	Q969903	NA	THALLIUM			< 0.004	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q108191	INORGANIC	THALLIUM	.1		0.0986	mg/L	99	
BLA01	Q108190	NA	THALLIUM			< 0.004	mg/L		
CDL01	Q108161	PERKIN-ELM	THALLIUM	.02		0.0228	mg/L	114	

LEAD TRACE ICP SW846-6010A

Analyst : J. KRAMER Analysis Date: 16-SEP-94 Instrument: ICP Test: M116.0.0
Reviewer: D. CZERNY Review Date: 20-SEP-94 File ID: Run: R230462

Prep: FAA OR ICP ACID DIGESTION OF S/S/S SAMPLES SW846-3050A

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q108180	PERKIN-ELM	LEAD	.04		0.0388	mg/L	97	
DUP02	0969901	A320969	LEAD	27.7		30.1	mg/kg		8
SPI02	0969899	A320969	LEAD	27.7	50.0	73.3	mg/kg	91	
CDL01	Q108172	INORGANIC	LEAD	.5		0.502	mg/L	100	
ICS-A	Q108168	PERKIN ELM	LEAD	1		0.877	mg/L	88	
CCV	Q108164	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108165	NA	LEAD			< 0.002	mg/L		
LCS	0969902	INORGANIC	LEAD	.5		0.481	mg/L	96	
BLA02	0969903	NA	LEAD			< 0.002	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q108191	INORGANIC	LEAD	.1		0.0969	mg/L	97	
BLA01	Q108190	NA	LEAD			< 0.002	mg/L		
CDL01	Q108161	PERKIN-ELM	LEAD	.006		0.00561	mg/L	94	
ICS-A	Q108162	PERKIN ELM	LEAD	1		0.849	mg/L	85	

MERCURY CVAA SW846-7471(MOD)

Analyst : R. BYERS Analysis Date: 08-SEP-94 Instrument: CVAA Test: M120.2.0
Reviewer: D. CZERNY Review Date: 08-SEP-94 File ID: 001063 Run: R229243

Prep: MERCURY CVAA ACID DIGESTION OF S/S/S SAMPLES SW846-7471(MOD)

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
ICV01	Q100962		MERCURY	.00147		.00148	mg/L	100.7	
DUP02	0997707	A320969	MERCURY	0		BDL	mg/kg		
SPI02	0997705	A320969	MERCURY	0	.25	.246	mg/kg	98.4	
CDL01	Q100980		MERCURY	.0002		.000166	mg/L	83	
CCV	Q101482		MERCURY	.003		.00283	mg/L	94.3	
BLA01	Q101483		MERCURY			< .00008	mg/L		
LCS	0997703		MERCURY	.003		.00265	mg/L	88.3	
BLA02	0997704		MERCURY			< .00008	mg/L		
SAMPLE	A320972		See Certificate of Analysis						
CCV	Q101484		MERCURY	.003		.00271	mg/L	90.3	
BLA01	Q101485		MERCURY			< .00008	mg/L		
CDL01	Q101486		MERCURY	.0002		.000136	mg/L	68	

VOLATILE ORGANICS (HEATED PURGE & TRAP) SW846-8240A

Analyst : B. MAZUR Analysis Date: 13-SEP-94 Instrument: GC/MS VOA Test: 0510.9.0
Reviewer: R. SHAMP Review Date: 16-SEP-94 File ID: >7845C Run: R230149

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPI01	Q106487	A321023	1,1-DICHLOROETHENE	0	50	44.1	ug/kg	88.2	
SPI01	Q106487	A321023	TRICHLOROETHENE	0	50	43.3	ug/kg	86.6	
SPI01	Q106487	A321023	BENZENE	0	50	46.4	ug/kg	92.8	
SPI01	Q106487	A321023	TOLUENE	0	50	47.5	ug/kg	95	
SPI01	Q106487	A321023	CHLOROBENZENE	0	50	41.6	ug/kg	83.2	
DPS01	Q106488	A321023	1,1-DICHLOROETHENE	0	50	43.6	ug/L	87.2	1.1
DPS01	Q106488	A321023	TRICHLOROETHENE	0	50	43.6	ug/L	87.2	.7
DPS01	Q106488	A321023	BENZENE	0	50	46.4	ug/L	92.8	0
DPS01	Q106488	A321023	TOLUENE	0	50	51	ug/L	102	7.1
DPS01	Q106488	A321023	CHLOROBENZENE	0	50	43.8	ug/L	87.6	6.6
CCV	Q106485		See Attached Report g7840c.ind						
BLA01	Q106486		See Attached Report g7841c.ind						
SAMPLE	A320972		See Certificate of Analysis						

Comments

Q106487 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

Comments

Q106488 NOTE: LCS NOT REQUIRED BECAUSE MS/MSD PASSED METHOD CRITERIA.

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270A

Analyst : G. HUGHS Analysis Date: 14-SEP-94 Instrument: GC/MS SVOA Test: 0505.3.0

Reviewer: J. MINNIEAR, II Review Date: 16-SEP-94 File ID: >09188 Run: RZ30140

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
SPIO2	Q102479	A321022	PHENOL	0	3300	2330	ug/kg	70.6	
SPIO2	Q102479	A321022	2-CHLOROPHENOL	0	3300	2370	ug/kg	71.8	
SPIO2	Q102479	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2160	ug/kg	65.5	
SPIO2	Q102479	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2190	ug/kg	66.4	
SPIO2	Q102479	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2100	ug/kg	63.6	
SPIO2	Q102479	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2160	ug/kg	65.5	
SPIO2	Q102479	A321022	ACENAPHTHENE	0	3300	2190	ug/kg	66.4	
SPIO2	Q102479	A321022	4-NITROPHENOL	0	3300	1900	ug/kg	57.6	
SPIO2	Q102479	A321022	2,4-DINITROTOLUENE	0	3300	2270	ug/kg	68.8	
SPIO2	Q102479	A321022	PENTACHLOROPHENOL	0	3300	1090	ug/kg	33	
SPIO2	Q102479	A321022	PYRENE	0	3300	2130	ug/kg	64.5	
DPS02	Q102481	A321022	PHENOL	0	3300	2220	ug/kg	67.3	4.8
DPS02	Q102481	A321022	2-CHLOROPHENOL	0	3300	2520	ug/kg	76.4	6.2
DPS02	Q102481	A321022	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	0	3300	2370	ug/kg	71.8	9.2
DPS02	Q102481	A321022	N-NITROSO-DI-N-PROPYLAMINE	0	3300	2310	ug/kg	70	5.3
DPS02	Q102481	A321022	1,2,4-TRICHLOROBENZENE	0	3300	2250	ug/kg	68.2	7
DPS02	Q102481	A321022	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	0	3300	2360	ug/kg	71.5	8.8
DPS02	Q102481	A321022	ACENAPHTHENE	0	3300	2440	ug/kg	73.9	10.7
DPS02	Q102481	A321022	4-NITROPHENOL	0	3300	2010	ug/kg	60.9	5.6
DPS02	Q102481	A321022	2,4-DINITROTOLUENE	0	3300	2360	ug/kg	71.5	3.8
DPS02	Q102481	A321022	PENTACHLOROPHENOL	0	3300	1200	ug/kg	36.4	9.8
DPS02	Q102481	A321022	PYRENE	0	3300	2410	ug/kg	73	.4
CCV	Q106439		See Attached Report g0916b.ind						
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320972		See Certificate of Analysis						
LCS	Q102476	HLI	ACENAPHTHENE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	ACENAPHTHYLENE	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	ANTHRACENE	3300		1290	ug/kg	39.1	
LCS	Q102476	HLI	BENZO(A)PYRENE	3300		1340	ug/kg	40.6	
LCS	Q102476	HLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUOR	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	BENZO(K)FLUORANTHENE	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	(BENZYLBUTYLPHTHALATE) BUTYLBENZYLPH	3300		1700	ug/kg	51.5	
LCS	Q102476	HLI	BIS(2-CHLOROETHOXY)METHANE	3300		1570	ug/kg	47.6	
LCS	Q102476	HLI	BIS(2-CHLOROETHYL)ETHER	3300		1440	ug/kg	43.6	
LCS	Q102476	HLI	BIS(2-CHLOROISOPROPYL)ETHER	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	4-BROMODIPHENYL ETHER	3300		* 1500	ug/kg	45.5	
LCS	Q102476	HLI	CARBAZOLE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-CHLOROANILINE	3300		1170	ug/kg	35.5	
LCS	Q102476	HLI	2-CHLORONAPHTHALENE	3300		3110	ug/kg	94.2	
LCS	Q102476	HLI	4-CHLOROPHENYL-PHENYLETHER	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	CHRYSENE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	DIBENZ(A,H)ANTHRACENE	3300		1370	ug/kg	41.5	
LCS	Q102476	HLI	DIBENZOFURAN	3300		1630	ug/kg	49.4	
LCS	Q102476	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3,3'-DICHLOROBENZIDINE	3300		1280	ug/kg	38.8	
LCS	Q102476	HLI	DIETHYLPHTHALATE	3300		1480	ug/kg	44.8	
LCS	Q102476	HLI	DIMETHYLPHTHALATE	3300		1640	ug/kg	49.7	

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
LCS	Q102476	HLI	DI-N-BUTYLPHTHALATE	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	2,4-DINITROTOLUENE	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	2,6-DINITROTOLUENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	DI-N-OCTYLPHTHALATE	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	FLUORANTHENE	3300		1470	ug/kg	44.5	
LCS	Q102476	HLI	FLUORENE	3300		1550	ug/kg	47	
LCS	Q102476	HLI	HEXACHLOROBENZENE	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	HEXACHLOROBUTADIENE	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	HEXACHLOROCYCLOPENTADIENE	3300		1380	ug/kg	41.8	
LCS	Q102476	HLI	HEXACHLOROETHANE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	INDENO(1,2,3-CD)PYRENE	3300		1140	ug/kg	34.5	
LCS	Q102476	HLI	ISOPHORONE	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-METHYLNAPHTHALENE	3300		1620	ug/kg	49.1	
LCS	Q102476	HLI	NAPHTHALENE	3300		1610	ug/kg	48.8	
LCS	Q102476	HLI	2-NITROANILINE (O-NITROANILINE)	3300		1530	ug/kg	46.4	
LCS	Q102476	HLI	3-NITROANILINE (M-NITROANILINE)	3300		1520	ug/kg	46.1	
LCS	Q102476	HLI	4-NITROANILINE (P-NITROANILINE)	3300		1330	ug/kg	40.3	
LCS	Q102476	HLI	NITROBENZENE	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	N-NITROSODIPHENYLAMINE	6600		2920	ug/kg	44.2	
LCS	Q102476	HLI	N-NITROSO-DI-N-PROPYLAMINE	3300		1750	ug/kg	53	
LCS	Q102476	HLI	PHENANTHRENE	3300		* 1450	ug/kg	43.9	
LCS	Q102476	HLI	PYRENE	3300		* 1550	ug/kg	47	
LCS	Q102476	HLI	1,2,4-TRICHLOROBENZENE	3300		1500	ug/kg	45.5	
LCS	Q102476	HLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M-	3300		1580	ug/kg	47.9	
LCS	Q102476	HLI	2-CHLOROPHENOL	3300		1550	ug/kg	47	
LCS	Q102476	HLI	2,4-DICHLOROPHENOL	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2,4-DIMETHYLPHENOL	3300		1460	ug/kg	44.2	
LCS	Q102476	HLI	2,4-DINITROPHENOL	3300		729	ug/kg	22.1	
LCS	Q102476	HLI	2-METHYLPHENOL (O-CRESOL)	3300		1550	ug/kg	47	
LCS	Q102476	HLI	4-METHYLPHENOL (P-CRESOL)	3300		1590	ug/kg	48.2	
LCS	Q102476	HLI	2-NITROPHENOL	3300		1540	ug/kg	46.7	
LCS	Q102476	HLI	4-NITROPHENOL	3300		1110	ug/kg	33.6	
LCS	Q102476	HLI	PENTACHLOROPHENOL	3300		776	ug/kg	23.5	
LCS	Q102476	HLI	PHENOL	3300		1560	ug/kg	47.3	
LCS	Q102476	HLI	2,4,5-TRICHLOROPHENOL	3300		1430	ug/kg	43.3	
LCS	Q102476	HLI	2,4,6-TRICHLOROPHENOL	3300		1490	ug/kg	45.2	

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. WILLIAMS Analysis Date: 19-SEP-94 Instrument: GC/ECD Test: 0305.1.0

Reviewer: L. JULIAN Review Date: 22-SEP-94 File ID: 5418 Run: R230887

Prep: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

QC Type	Identifier	Source	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
BLA02	Q106685		See Attached Report g8001f.ind						
SAMPLE	A320972		See Certificate of Analysis						

Notes

BDL *Below Detection Limit*
< *Less Than Lower Detection Limit*
*** *See Note for Parameter*

Quality Assurance Officer: GABuck

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

QUALITY ASSURANCE REPORT PACKAGE #1741
CONESTOGA-ROVER & ASSOCIATES, INC.

DEBBIE GAGE
CONESTOGA-ROVER & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD SUITE 103
ROSEMONT, IL 60018
(708) 299-9933

HERITAGE # A313419-437

PREPARED BY: HERITAGE ENVIRONMENTAL SERVICES, INC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
(317) 243-8304

APPROVED BY: Terry A. Klingler
PROJECT CHEMIST

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	PCB/PEST	HCN	Metals							REMARKS
	6/4/94	1032	SW-060494-WP-002	water	6	-	-	-	-							A313419
			TOTAL NUMBER OF CONTAINERS		6											

RELINQUISHED BY:	DATE: TIME:	RECEIVED BY:	DATE: TIME:
① [signature]	6/6/94 1700	②	
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: ~~[illegible]~~ Hand Deliver AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: K. Johnson, D. Robinson

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/6/94 TIME: 0800 Am

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SW 8260	BEST/PCB	Metals	HLN						REMARKS
	6/4/94	1100	SW-060494-WP-004	water	6	-	-	-	-						A313420
			TOTAL NUMBER OF CONTAINERS		6										

RELINQUISHED BY: ① [signature]	DATE: 6/5/94 TIME: 17:00	RECEIVED BY: ② [signature]	DATE: 6/6/94 TIME: 1220
RELINQUISHED BY: ② [signature]	DATE: 6/6/94 TIME: 1020	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: ~~[illegible]~~ Hand Delivered AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: K. Johnson, D. Robinson

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/6/94 TIME: 0800 AM

N 3990

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5364

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pochron

PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	Cyanide	Ignitability	PCB/Pest							REMARKS
1	6/4/94	1100	SW-060494-WP-027	Water	10	4	1	1	4							A313421
				TOTAL NUMBER OF CONTAINERS	10											

RELINQUISHED BY: ① Walter J. Pochron	DATE: 6/5/95 TIME: 1730	RECEIVED BY: ② [illegible]	DATE: 6/5/94 TIME: [illegible]
RELINQUISHED BY: ② [illegible]	DATE: 6/6/94 TIME: [illegible]	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: In person

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: W. Pochron, T. Lee

RECEIVED FOR LABORATORY BY: Robert Cuthel

DATE: 6/6/94 TIME: 0810 Am

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pochron

PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	PCB/Pest	Cyanide	Metals								REMARKS
1	6/4/94	1415	SW-060494-WP-035	Water	~~6~~ 3	2	1	1									A313422

TOTAL NUMBER OF CONTAINERS 16

RELINQUISHED BY: ① Walter J. Pochron	DATE: 6/5/94 TIME: 1730	RECEIVED BY: ②	DATE: 6/5/94 TIME: 1730
RELINQUISHED BY: ②	DATE: 6/6/94 TIME: 0800	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: In person

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: W. Pochron, T. Leo

RECEIVED FOR LABORATORY BY:

DATE: 6/6/94 TIME: 0800

CRA

CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pochron

PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC	PCB/PEST	Cyanide	Metals						REMARKS
1	6/4/94	1515	SW-060494-WP-039	Water	6	2	2	1	1							A313423
			TOTAL NUMBER OF CONTAINERS		6											

RELINQUISHED BY: ①	DATE: 6/6/94 TIME: 0800	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: In person

AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: W. Pochron, T. Leo

RECEIVED FOR LABORATORY BY: [illegible]

DATE: 6/6/94 TIME: 0800 am

1000

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC/PCBs/Pesticides	Metals/HCN	REMARKS
	6/4/94	1115	P-060494-WP-002	Sediment	2	/	/		A313 424
	6/4/94	1215	P-060494-WP-004	Sediment	2	/	/		426
	6/4/94	1240	P-060494-WP-006	Sediment	2	/	/		427
	6/4/94	1300	P-060494-WP-008	Sediment	2	/	/		428
			TOTAL NUMBER OF CONTAINERS		4				

RELINQUISHED BY: ① [signature]	DATE: 6/5/94 TIME: 17:00	RECEIVED BY: ② [signature]	DATE: 6/5/94 TIME: 1700
RELINQUISHED BY: ② [signature]	DATE: 6/6/94 TIME: 0800	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: ~~[illegible]~~ Hand Deliver AIR BILL No.

White - Fully Executed Copy
Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: K. Johnson, D. Robinson

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/6/94 TIME: 0800 Am

N° 3991

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Daniel J. Robinson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: VOC	SVOC	PEST/PCB								REMARKS
	6/4/94	1345	D-06-0494-WP-010	sediment	2	-	-									1313429
	6/4/94	1400	D-06-0494-WP-012	sediment	2	-	-									430
	6/4/94	1430	D-06-0494-WP-014	sediment	2	-	-									431
	6/4/94	1500	D-06-0494-WP-016	sediment	2	-	-									432

TOTAL NUMBER OF CONTAINERS 8

RELINQUISHED BY: ① [signature]	DATE: 6/5/94 TIME: 17:00	RECEIVED BY: ② [signature]	DATE: 6/5/94 TIME: 1700
RELINQUISHED BY: ② [signature]	DATE: 6/6/94 TIME: 0800	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: ~~[illegible]~~ Hand Deliver AIR BILL No.

White	-Fully Executed Copy
Yellow	-Receiving Laboratory Copy
Pink	-Shipper Copy
Goldenrod	-Sampler Copy

SAMPLE TEAM: K. Jol D. Robinson

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/6/94 TIME: 8:00 Am

3992

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road – Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME:

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Walter J Pachan

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC	PCB/Pest	Cyanide	Metals					REMARKS
1	6/4/94	1125	D-060494-WP-029	Soil	2	✓	✓	✓	✓	✓					1313 433
2	6/4/94	1200	D-060494-WP-031	Soil	2	✓	✓	✓	✓	✓					434
3	6/4/94	1225	D-060494-WP-033	Soil	2	✓	✓	✓	✓	✓					435
4	6/4/94	1425	D-060494-WP-037	Soil	2	✓	✓	✓	✓	✓					436
5	6/4/94	1525	D-060494-WP-041	Soil	2	✓	✓	✓	✓	✓					MS/MSD 437
				TOTAL NUMBER OF CONTAINERS											

RELINQUISHED BY: ① [signature]	DATE: 6/6/94 TIME: 0800	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: In person

AIR BILL No.

White – Fully Executed Copy
Yellow – Receiving Laboratory Copy
Pink – Shipper Copy
Goldenrod – Sampler Copy

SAMPLE TEAM: W. Pachan, T. Leo

RECEIVED FOR LABORATORY BY: Robert [signature]
DATE: 6/6/94 TIME: 0800 Am

N° 1001

EMS LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317/243-0360

HERITAGE

CASE NARRATIVE
METALS SECTION

SAMPLE # A313419-423

THESE SAMPLES WERE ANALYZED USING THE NORMAL PROCEDURES WITH NO MODIFICATIONS.

Steven J. Endersen 6-22-94
STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

METALS CASE NARRATIVE

SAMPLE # A313424; A313426-A313437

The following samples had matrix interference for antimony, and had to be diluted: A313424, A313426-432, A313434-437. In addition, the matrix spikes on samples A313427 and A313436 were diluted out due to matrix interference. Also, sample A313437 had matrix interference for Cd, and had to be diluted.

Steven J. Endersen 7-7-94

STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

ICP TRACE METALS	SW846-6010A
pH (AQUEOUS)	SW846-9040
FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES	SW846-3005A
MERCURY CVAA	SW846-7470

CONTROL LIMITS (75-125%R, 20%RPD)

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A313410-A313424, A313426-A313437

Less sample was filtered due to the sample matrix for the Total Dissolved Solids of #A313414.

Less sample was filtered due to the sample matrix for the Total Suspended Solids of #A313414.

For the Alkalinity analysis, the holding time was missed for #A313410 and #A313411 due to analyst' error.

For the Total Cyanide analysis, Sample #A313415 exhibited low spike recovery (67%). The sample an spike were analyzed twice. Also, for the Total Cyanide analysis of #A313432, a sample dilution was necessary due to matrix interference.

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
6/28/94

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CYANIDE DISTILLATION	SW846-9010A
CYANIDE, TOTAL (AUTOMATED)	SW846-9012
SULFATE (TURBIDIMETRIC)	SW846-9012
CHLORIDE (COLORIMETRIC, AUTOMATED)	SW846-9251
NITROGEN, NITRATE (COLORIMETRIC AUTOMATED)	EPA 353.2
AMMONIA DISTILLATION	EPA 350.2
AMMONIA NITROGEN	EPA 350.3
ALKALINITY TOTAL	EPA 310.1
TOTAL SUSPENDED SOLIDS	EPA 160.2
DISSOLVED SOLIDS	EPA 160.1

CONTROL LIMITS (75-125% R, 20% RPD)

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46234
Phone: 317-243-8304
FAX: 317-243-0360

CASE NARRATIVE
GC GROUP

SAMPLE #A313419-A31423, A313424, A313426-A313437

The samples in this case were below detection limits for all analytes. The case was analyzed 3 separate times on two different instruments, each containing two different columns. All six analysis contained the same problems. The percent breakdown increased greatly during the runs, and the percent deviation for continuing calibration standards also increased. Because this occurred on all analysis and reanalysis the problem must be related to matrix interferences deposited on the instrument columns from the samples. The problems are outlined below with the limits for acceptability.

GC/ECD # 25 CH7

EVAL B	DATE / TIME	ENDRIN	4,4'-DDT	TOTAL
INITIAL	20 Jun 94 02:34 PM	10.35%	0.00%	7.34%
INJ #2	21 Jun 94 07:13 PM	13.61%	0.00%	9.59%
~~INJ #3~~	~~22 Jun 94 03:06 AM~~	~~0.00%~~	~~0.00%~~	~~0.00%~~
INJ #4	22 Jun 94 10:24 AM	16.49%	44.66%	24.19%
INJ #5 #3	22 JUN 94 05:06 AM	4.73%	37.7%	13.8%
INJ #6				
INJ #7				
INJ #8				
INJ #9				
INJ #10				

GC/ECD # 25 CH8

EVAL B	DATE / TIME	ENDRIN	4,4'-DDT	TOTAL
INITIAL	20 Jun 94 01:59 PM	11.87%	0.00%	7.38%
INJ #2	21 Jun 94 06:36 PM	20.36%	3.82%	14.20%
INJ #3	22 Jun 94 02:30 AM	8.64%	62.83%	23.35%
INJ #4	22 Jun 94 09:47 AM	10.16%	74.62%	26.62%
INJ #5				
INJ #6				
INJ #7				
INJ #8				
INJ #9				
INJ #10				

REVIEWED BY: LAJ
DATE 6-28-94

The % deviation for the continuing calibration standards is outlined below. The limits are 15.0% for the primary channel and 20.0% for the confirmation channel. Only the analytes that did not meet this requirement are listed below.

Primary - Instrument 25 ch7

CCVA y1538 6/21/1994 10:51

All analytes in

CCVB y1069 6/22/1994 7:22

All analytes in

CCVA y1538 6/22/1994 2:02

Alpha-bhc 16.18%	Gamma-bhc 17.74%
4,4'-ddd 25.47%	4,4'-DDT 32.76%

CCVB y1069 6/22/1994 2:39

Beta-bhc 19.41%	Delta-bhc 30.65%
Heptachlor epoxide 15.74%	Gamma-chlordane 18.52%
4,4'-dde 29.28%	

Confirmation- Instrument 25 ch8

CCVA y1538 6/21/1994 10:15

All analytes in

CCVB y1069 6/22/1994 6:45

Aldrin 18.63%	Beta-bhc 31.12%
Delta-bhc 34.68%	heptachlor epoxide 25.77%
Gamma-chlordane 21.31%	Alpha- chlordane 21.68%
4,4'-dde 40.74%	Endosulfan II 30.90%
Endrin Aldehyde 29.77%	Endosulfan sulfate 29.30%

CCVA y1538 6/22/1994 1:26

Alpha-bhc 17.96%	Gamma-bhc 19.80%
Endrin 20.05%	4,4'ddd 47.35%

4,4-ddt 168.38%

Methoxychlor 122.57%

CCVB y1069 6/22/19914 2:02

Aldrin 19.21

Beta-bhc 30.84%

Delta-bhc 33.72%

Heptachlor epoxide 26.00

Gamma-chlordane 21.05%

Alpha- chlordane 21.38%

4,4'-dde 38.60%

Endosulfan II 29.17%

Endrin Aldehyde 28.17%

Endosulfan sulfate 26.95%

Lisa A. Julian

Lisa A. Julian
GC Group Leader

6-27-94 3 mc

Page 3 of 3

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SAMPLES A313419-425

The criteria for SW-846 Method 8260A was followed for initial and continuing calibration for the low level waters. We were unable to meet the minimum response factor for the compound bromoform. We believe this is due to the 25 mL purge volume necessary to meet the required detection limits.

The MS/MSD control limits for semi-volatiles was taken directly from the method (8270) and the limits for the soils and medium level waters were from 8240. Those that appear on the forms included in this package are our laboratory generated advisory limits which are updated quarterly. There are no limits in method 8260A so we used the advisory limits from the Heritage QAP. All data was put in a spreadsheet so we can generate our own limits for use in the future. Acetone was consistently outside the advisory limits. We believe this is a combination of the 25 mL purge volume and the prevalence of acetone in the laboratory.

Sample A313424 contained target analytes which exceeded the linear calibration range when initially analyzed for volatiles. It was diluted and reanalyzed. Both analyses are reported.

There were no other QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SAMPLES A313426-437

The MS/MSD control limits for semi-volatiles were taken directly from the method (8270). Those that appear on the forms included in this package are our laboratory generated advisory limits which are updated quarterly.

Sample A313429 failed to pass internal standard area criteria and surrogate recovery when initially analyzed. It was reanalyzed with no improvement. Only the original analysis is reported.

There were no other QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

Heritage Laboratory, Indianapolis
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 11 Jun 94 9:12 am
Data File: C:\I061194\6141J.D GCMS#9 Misc. CALIBRATION CHECK 6/11/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 10 07:24:04 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2		Dichlorodifluoromethane	0.50012	0.39878	20.3
3		Chloromethane	0.38332	0.34279	10.6
4		Vinyl Chloride	0.32516	0.29687	8.7
5		Bromomethane	0.39330	0.35939	8.6
6		Chloroethane	0.19574	0.19200	1.9
7		Trichlorofluoromethane	0.79094	0.68866	12.9
8		Acrolein	0.00327	0.00344	5.4
9		Acetone	0.02002	0.01516	24.3
10		1,1-Dichloroethene	0.41655	0.38792	6.9
11		Methylene Chloride	0.37032	0.31907	13.8
12		Acrylonitrile	0.01757	0.02785	58.5
13		Carbon Disulfide	1.18635	0.98441	17.0
14		Vinyl Acetate	0.36512	0.28081	23.1
15		trans-1,2-Dichloroethene	0.46335	0.42952	7.3
16		1,1-Dichloroethane	0.77566	0.72713	6.3
17		2-Butanone	0.03840	0.03339	13.1
18		cis-1,2-Dichloroethene	0.45198	0.41153	8.9
19		Chloroform	0.79409	0.71244	10.3
20		Bromochloromethane	0.15972	0.14349	10.2
21		2,2-Dichloropropane	0.59917	0.57988	3.2
22		1,1,1-Trichloroethane	0.72319	0.66634	7.9
23		Iodomethane	0.99715	0.85018	14.7
24	I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25		1,1-Dichloropropene	0.20283	0.18827	7.2
26	S	1,2-Dichloroethane-d4	0.21713	0.18734	13.7
27		Carbon Tetrachloride	0.59804	0.56109	6.2
28		1,2-Dichloroethane	0.27408	0.22708	17.1
29		Benzene	1.12326	1.06039	5.6
30		Trichloroethene	0.49683	0.44042	11.4
31		1,2-Dichloropropane	0.42006	0.37780	10.1
32		Bromodichloromethane	0.61387	0.53101	13.5
33		Dibromomethane	0.24328	0.21404	12.0
34		4-Methyl-2-Pentanone	0.20470	0.13418	34.5
35		2-Chloroethylvinylether	0.08005	0.03455	56.8
36		cis-1,3-Dichloropropene	0.46166	0.40063	13.2
37	S	Toluene-d8	1.04582	0.98211	6.1
38		Toluene	1.26584	1.15777	8.5
39		trans-1,3-Dichloropropene	0.31213	0.25857	17.2
40		1,1,2-Trichloroethane	0.21141	0.17782	15.9
41		1,2-Dibromoethane	0.28445	0.22856	19.6
42	S	4-Bromofluorobenzene	0.62761	0.59198	5.7
43	I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 11 Jun 94 9:12 am
Data File: C:\I061194\6141J.D GCMS#9 Misc. CALIBRATION CHECK 6/11/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 10 07:24:04 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#	Compound	AvgRRF	CCRRF	%Dev
44	2-Hexanone	0.11569	0.09276	19.8
45	1,3-Dichloropropane	0.44805	0.38394	14.3
46	Tetrachloroethene	0.76995	0.73860	4.1
47	Dibromochloromethane	0.47966	0.44972	6.2
48	Chlorobenzene	1.15921	1.05443	9.0
49	1,1,1,2-Tetrachloroethane	0.52593	0.46034	12.5
50	Ethyl Benzene	0.63051	0.60631	3.8
51	o,m-Xylene	0.79619	0.76029	4.5
52	p-Xylene	0.71928	0.68077	5.4
53	Styrene	1.15837	1.10261	4.8
54	Bromoform	0.23071	0.20588	10.8
55 I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56	Isopropylbenzene	3.48645	3.16936	9.1
57	trans-1,4-Dichloro-2-butene	0.02892	0.02052	29.0
58	1,1,2,2-Tetrachloroethane	0.44868	0.41850	6.7
59	Bromobenzene	1.58568	1.39557	12.0
60	1,2,3-Trichloropropane	0.29220	0.08986	69.2
61	n-Propylbenzene	0.48860	0.45469	6.9
62	1,3,5-Trimethylbenzene	2.61938	2.50570	4.3
63	2-Chlorotoluene	0.73236	0.68485	6.5
64	4-Chlorotoluene	0.73839	0.64512	12.6
65	t-Butylbenzene	2.58756	2.43605	5.9
66	1,2,4-Trimethylbenzene	2.56215	2.43230	5.1
67	sec-Butylbenzene	4.22555	4.01448	5.0
68	p-Isopropyltoluene	2.87246	2.82290	1.7
69	1,3-Dichlorobenzene	1.56747	1.43933	8.2
70	1,4-Dichlorobenzene	1.51852	1.37223	9.6
71	n-Butylbenzene	2.03280	2.04603	0.7
72	1,2-Dichlorobenzene	1.18051	1.07215	9.2
73	1,2-Dibromo-3-chloropropane	0.09531	0.07932	16.8
74	1,2,4-Trichlorobenzene	0.87256	0.82951	4.9
75	Naphthalene	0.80810	0.70097	13.3
76	Hexachlorobutadiene	0.91731	0.92521	0.9
77	1,2,3-Trichlorobenzene	0.66289	0.61530	7.2

(#) = Out of Range (Advisory for non-CCC)

VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8260

MASS SPEC FILE: >6142J
ANALYSIS DATE/TIME: 6/11/94 10:09

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	10
Benzene	BDL	uG/L	1
Bromodichloromethane	BDL	uG/L	1
Bromoform	BDL	uG/L	1
Bromomethane	BDL	uG/L	1
Carbon disulfide	BDL	uG/L	1
Carbon tetrachloride	BDL	uG/L	1
Chlorobenzene	BDL	uG/L	1
Chloroethane	BDL	uG/L	1
Chloroform	BDL	uG/L	1
Chloromethane	BDL	uG/L	1
Dibromochloromethane	BDL	uG/L	1
cis-1,3-Dichloropropene	BDL	uG/L	1
1,1-Dichloroethane	BDL	uG/L	1
1,2-Dichloroethane	BDL	uG/L	1
1,1-Dichloroethene	BDL	uG/L	1
1,2-Dichloropropane	BDL	uG/L	1
Ethylbenzene	BDL	uG/L	1
Fluorotrichloromethane	BDL	uG/L	1
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	1
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	1
1,1,2,2-Tetrachloroethane	BDL	uG/L	1
Tetrachloroethene	BDL	uG/L	1
Toluene	BDL	uG/L	1
1,2-Dichloroethene (total)	BDL	uG/L	1
trans-1,3-Dichloropropene	BDL	uG/L	1
1,1,1-Trichloroethane	BDL	uG/L	1
1,1,2-Trichloroethane	BDL	uG/L	1
Trichloroethene	BDL	uG/L	1
Vinyl chloride	BDL	uG/L	1
Xylenes (total)	BDL	uG/L	1

SURROGATE LIST		
Dichloroethane-d4	99	% Rec
Toluene-d8	106	% Rec
Bromofluorobenzene	103	% Rec

( ) = ESTIMATED CONCENTRATION

Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 14 Jun 94 8:50 am
Data File: C:\H061494\7679H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Tue Jun 14 16:50:08 1994

= CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
2		N-nitroso-dimethylamine	0.36904	0.40699	10.3
3		Pyridine	0.83572	0.79465	4.9
4		2-Picoline	0.88170	0.84106	4.6
5	S	2-Fluorophenol	0.92203	0.88717	3.8
6	S	Phenol-d5	1.02955	0.97359	5.4
7		Aniline	1.27050	1.15259	9.3
8	MC	Phenol	1.12492	1.10340	1.9
9		bis(2-Chloroethyl)ether	0.90784	0.93631	3.1
10	S	2-Chlorophenol-d4	0.96563	0.97320	0.8
11	MC	2-Chlorophenol	0.94615	0.95397	0.8
12		1,3-Dichlorobenzene	1.21961	1.26734	3.9
13	MC	1,4-Dichlorobenzene	1.20732	1.25343	3.8
14	S	1,2-Dichlorobenzene-d4	1.38053	1.43351	3.8
15		1,2-Dichlorobenzene	1.09511	1.15542	5.5
16		Benzyl alcohol	0.54293	0.55190	1.7
17		2-Methylphenol	0.81173	0.80433	0.9
18		bis(2-chloroisopropyl)ether	0.99574	0.89195	10.4
19	MP	n-Nitroso-di-n-propylamine	0.57510	0.59619	3.7
20		4-Methylphenol	0.82877	0.81362	1.8
21		Hexachloroethane	0.43268	0.44861	3.7
22	I	Naphthalene-d8	1.00000	1.00000	0.0
23	S	Nitrobenzene-d5	0.33500	0.33695	0.6
24		Nitrobenzene	0.31907	0.31859	0.2
25		Isophorone	0.64486	0.62681	2.8
26	C	2-Nitrophenol	0.21584	0.21943	1.7
27		2,4-Dimethylphenol	0.28753	0.27847	3.2
28		bis(2-Chloroethoxy)methane	0.38746	0.39617	2.2
29	C	2,4-Dichlorophenol	0.35708	0.37473	4.9
30		Benzoic acid	0.21885	0.21396	2.2
31	M	1,2,4-Trichlorobenzene	0.38365	0.43399	13.1
32		Naphthalene	0.84231	0.85113	1.0
33		4-Chloroaniline	0.32991	0.33650	2.0
34		Toluenediamine	0.00811	0.00384	52.6
35	C	Hexachlorobutadiene	0.14393	0.15970	11.0
36	MC	4-Chloro-3-methylphenol	0.24875	0.25458	2.3
37		2-Methylnaphthalene	0.63547	0.68015	7.0
38	I	Acenaphthene-d10	1.00000	1.00000	0.0
39	P	Hexachlorocyclopentadiene	0.23118	0.08089	65.0
40		1,2,4,5-Tetrachlorobenzene	0.36895	0.39589	7.3
41	C	2,4,6-Trichlorophenol	0.34977	0.35491	1.5
42		2,4,5-Trichlorophenol	0.35883	0.38938	8.5
43	S	2-Fluorobiphenyl	1.25919	1.31398	4.4

Heritage Laboratory, Indianapolis
Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 14 Jun 94 8:50 am
Data File: C:\H061494\7679H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Tue Jun 14 16:50:08 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Chloronaphthalene	1.08652	1.09838	1.1
45		2-Nitroaniline	0.24437	0.22529	7.8
46		Dimethylphthalate	1.16822	1.19888	2.6
47		1,3-Dinitrobenzene	0.25695	0.24921	3.0
48		2,6-Dinitrotoluene	0.34773	0.34337	1.3
49		Acenaphthylene	1.58561	1.54428	2.6
50		3-Nitroaniline	0.28120	0.20864	25.8
51	MC	Acenaphthene	0.92543	0.91714	0.9
52	P	2,4-Dinitrophenol	0.20783	0.15317	26.3
53	MP	4-Nitrophenol	0.12168	0.08680	28.7
54		Dibenzofuran	1.46307	1.47113	0.6
55	M	2,4-Dinitrotoluene	0.42968	0.41711	2.9
56		2,3,4,6-Tetrachlorophenol	0.25032	0.23569	5.8
57		Diethylphthalate	1.13169	1.13910	0.7
58		Fluorene	1.16322	1.14570	1.5
59		4-Chlorophenyl-phenylether	0.48250	0.48495	0.5
60		4-Nitroaniline	0.28837	0.18863	34.6
61	I	Phenanthrene-d10	1.00000	1.00000	0.0
62		4,6-Dinitro-2-methylphenol	0.15478	0.13422	13.3
63	C	n-Nitrosodiphenylamine	0.54108	0.52053	3.8
64		1,2-Diphenylhydrazine	0.60805	0.54242	10.8
65	S	2,4,6-Tribromophenol	0.16072	0.16600	3.3
66		alpha-BHC	0.12715	0.13274	4.4
67		4-Bromophenyl-phenylether	0.16627	0.16809	1.1
68		Hexachlorobenzene	0.24975	0.26533	6.2
69		beta-BHC	0.09988	0.10016	0.3
70	MC	Pentachlorophenol	0.16322	0.12760	21.8
71		gamma-BHC	0.10453	0.11545	10.4
72		Phenanthrene	0.95533	0.94537	1.0
73		Anthracene	1.01852	0.97251	4.5
74		delta-BHC	0.09396	0.09248	1.6
75		Carbazole	0.86387	0.71655	17.1
76		Heptachlor	0.09197	0.10239	11.3
77		Di-n-butylphthalate	1.09433	1.07678	1.6
78		Aldrin	0.06180	0.06383	3.3
79		Heptachlor epoxide	0.03245	0.02987	7.9
80	C	Fluoranthene	0.83032	0.71933	13.4
81	I	Chrysene-d12	1.00000	1.00000	0.0
82		Benzidine	0.59970	0.15393	74.3
83	M	Pyrene	1.43326	1.98471	38.5
84		alpha-Endosulfan	0.02784	0.04408	58.3
85		p,p'-DDE	0.26069	0.38406	47.3
86	S	Terphenyl-d14	1.05278	1.40330	33.3

Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 14 Jun 94 8:50 am
Data File: C:\H061494\7679H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Tue Jun 14 16:50:08 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
87		Dieldrin	0.21987	0.30770	40.0
88		Endrin	0.01190	0.01940	63.1
89		Endrin aldehyde	0.02886	0.04056	40.5
90		beta-Endosulfan	0.04932	0.06782	37.5
91		p,p'-DDD	0.48305	0.59561	23.3
92		Butylbenzylphthalate	0.85905	0.99166	15.4
93		Endosulfan sulfate	0.08545	0.11585	35.6
94		p,p'-DDT	0.32764	0.47936	46.3
95		Benzo[a]anthracene	1.08076	1.10319	2.1
96		3,3'-Dichlorobenzidine	0.32567	0.30039	7.8
97		Chrysene	0.95700	0.95183	0.5
98		bis(2-Ethylhexyl)phthalate	1.10886	1.17293	5.8
99	I	Perylene-d12	1.00000	1.00000	0.0
100	C	Di-n-octylphthalate	3.35785	3.50800	4.5
101		Benzo[b]fluoranthene	1.61101	1.79163	11.2
102		Benzo[k]fluoranthene	1.48873	1.55157	4.2
103	C	Benzo[a]pyrene	1.33016	1.41934	6.7
104		Indeno[1,2,3-cd]pyrene	1.10147	1.47051	33.5
105		Dibenz[a,h]anthracene	0.89244	1.17670	31.9
106		Benzo[g,h,i]perylene	0.86872	1.17984	35.8

(#) = Out of Range (Advisory for non-CCC)

HERITAGE LABORATORIES, INC
SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7682H SVL# 774-018

ANALYSIS DATE/TIME: 6/14/94 11:30

PREP DATE: 6/9/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
Pyrene.....	BDL	uG/L	10
Tetrachlorobenzenes.....	BDL	uG/L	10
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	47	% Rec	100
Phenol-d5.....	36	% Rec	100
Nitrobenzene-d5.....	61	% Rec	50
2-Fluorobiphenyl.....	66	% Rec	50
2,4,6-Tribromophenol.....	54	% Rec	100
Terphenyl-d14.....	75	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratory, Indianapolis
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 11 Jun 94 9:12 am
Data File: C:\I061194\6141J.D GCMS#9 Misc. CALIBRATION CHECK 6/11/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 10 07:24:04 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2		Dichlorodifluoromethane	0.50012	0.39878	20.3
3		Chloromethane	0.38332	0.34279	10.6
4		Vinyl Chloride	0.32516	0.29687	8.7
5		Bromomethane	0.39330	0.35939	8.6
6		Chloroethane	0.19574	0.19200	1.9
7		Trichlorofluoromethane	0.79094	0.68866	12.9
8		Acrolein	0.00327	0.00344	5.4
9		Acetone	0.02002	0.01516	24.3
10		1,1-Dichloroethene	0.41655	0.38792	6.9
11		Methylene Chloride	0.37032	0.31907	13.8
12		Acrylonitrile	0.01757	0.02785	58.5
13		Carbon Disulfide	1.18635	0.98441	17.0
14		Vinyl Acetate	0.36512	0.28081	23.1
15		trans-1,2-Dichloroethene	0.46335	0.42952	7.3
16		1,1-Dichloroethane	0.77566	0.72713	6.3
17		2-Butanone	0.03840	0.03339	13.1
18		cis-1,2-Dichloroethene	0.45198	0.41153	8.9
19		Chloroform	0.79409	0.71244	10.3
20		Bromochloromethane	0.15972	0.14349	10.2
21		2,2-Dichloropropane	0.59917	0.57988	3.2
22		1,1,1-Trichloroethane	0.72319	0.66634	7.9
23		Iodomethane	0.99715	0.85018	14.7
24	I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25		1,1-Dichloropropene	0.20283	0.18827	7.2
26	S	1,2-Dichloroethane-d4	0.21713	0.18734	13.7
27		Carbon Tetrachloride	0.59804	0.56109	6.2
28		1,2-Dichloroethane	0.27408	0.22708	17.1
29		Benzene	1.12326	1.06039	5.6
30		Trichloroethene	0.49683	0.44042	11.4
31		1,2-Dichloropropane	0.42006	0.37780	10.1
32		Bromodichloromethane	0.61387	0.53101	13.5
33		Dibromomethane	0.24328	0.21404	12.0
34		4-Methyl-2-Pentanone	0.20470	0.13418	34.5
35		2-Chloroethylvinylether	0.08005	0.03455	56.8
36		cis-1,3-Dichloropropene	0.46166	0.40063	13.2
37	S	Toluene-d8	1.04582	0.98211	6.1
38		Toluene	1.26584	1.15777	8.5
39		trans-1,3-Dichloropropene	0.31213	0.25857	17.2
40		1,1,2-Trichloroethane	0.21141	0.17782	15.9
41		1,2-Dibromoethane	0.28445	0.22856	19.6
42	S	4-Bromofluorobenzene	0.62761	0.59198	5.7
43	I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 11 Jun 94 9:12 am
Data File: C:\I061194\6141J.D GCMS#9 Misc. CALIBRATION CHECK 6/11/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 10 07:24:04 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#	Compound	AvgRRF	CCRRF	%Dev
44	2-Hexanone	0.11569	0.09276	19.8
45	1,3-Dichloropropane	0.44805	0.38394	14.3
46	Tetrachloroethene	0.76995	0.73860	4.1
47	Dibromochloromethane	0.47966	0.44972	6.2
48	Chlorobenzene	1.15921	1.05443	9.0
49	1,1,1,2-Tetrachloroethane	0.52593	0.46034	12.5
50	Ethyl Benzene	0.63051	0.60631	3.8
51	o,m-Xylene	0.79619	0.76029	4.5
52	p-Xylene	0.71928	0.68077	5.4
53	Styrene	1.15837	1.10261	4.8
54	Bromoform	0.23071	0.20588	10.8
55 I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56	Isopropylbenzene	3.48645	3.16936	9.1
57	trans-1,4-Dichloro-2-butene	0.02892	0.02052	29.0
58	1,1,2,2-Tetrachloroethane	0.44868	0.41850	6.7
59	Bromobenzene	1.58568	1.39557	12.0
60	1,2,3-Trichloropropane	0.29220	0.08986	69.2
61	n-Propylbenzene	0.48860	0.45469	6.9
62	1,3,5-Trimethylbenzene	2.61938	2.50570	4.3
63	2-Chlorotoluene	0.73236	0.68485	6.5
64	4-Chlorotoluene	0.73839	0.64512	12.6
65	t-Butylbenzene	2.58756	2.43605	5.9
66	1,2,4-Trimethylbenzene	2.56215	2.43230	5.1
67	sec-Butylbenzene	4.22555	4.01448	5.0
68	p-Isopropyltoluene	2.87246	2.82290	1.7
69	1,3-Dichlorobenzene	1.56747	1.43933	8.2
70	1,4-Dichlorobenzene	1.51852	1.37223	9.6
71	n-Butylbenzene	2.03280	2.04603	0.7
72	1,2-Dichlorobenzene	1.18051	1.07215	9.2
73	1,2-Dibromo-3-chloropropane	0.09531	0.07932	16.8
74	1,2,4-Trichlorobenzene	0.87256	0.82951	4.9
75	Naphthalene	0.80810	0.70097	13.3
76	Hexachlorobutadiene	0.91731	0.92521	0.9
77	1,2,3-Trichlorobenzene	0.66289	0.61530	7.2

(#) = Out of Range (Advisory for non-CCC)

HERITAGE LABORATORIES, INC
VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >6142J
ANALYSIS DATE/TIME: 6/11/94 10:09

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	20
Acrolein	BDL	uG/L	50
Acrylonitrile	BDL	uG/L	70
Benzene	BDL	uG/L	5
Bromodichloromethane	BDL	uG/L	5
Bromoform	BDL	uG/L	5
Bromomethane	BDL	uG/L	10
Carbon disulfide	BDL	uG/L	5
Carbon tetrachloride	BDL	uG/L	5
Chlorobenzene	BDL	uG/L	5
Chloroethane	BDL	uG/L	10
Chloroform	BDL	uG/L	5
Chloromethane	BDL	uG/L	10
Dibromochloromethane	BDL	uG/L	5
cis-1,3-Dichloropropene	BDL	uG/L	5
Dichlorodifluoromethane	BDL	uG/L	5
1,1-Dichloroethane	BDL	uG/L	5
1,2-Dichloroethane	BDL	uG/L	5
1,1-Dichloroethene	BDL	uG/L	5
1,2-Dichloropropane	BDL	uG/L	5
Ethylbenzene	BDL	uG/L	5
Fluorotrichloromethane	BDL	uG/L	5
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	5
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	5
1,1,2,2-Tetrachloroethane	BDL	uG/L	5
Tetrachloroethene	BDL	uG/L	5
Tetrahydrofuran	BDL	uG/L	25
Toluene	BDL	uG/L	5
1,2-Dichloroethene (total)	BDL	uG/L	5
trans-1,3-Dichloropropene	BDL	uG/L	5
1,1,1-Trichloroethane	BDL	uG/L	5
1,1,2-Trichloroethane	BDL	uG/L	5
Trichloroethene	BDL	uG/L	5
Vinyl acetate	BDL	uG/L	10
Vinyl chloride	BDL	uG/L	10
Xylenes (total)	BDL	uG/L	5

SURROGATE LIST			spike conc
Dichloroethane-d4	99	% Rec	50
Toluene-d8	106	% Rec	50
Bromofluorobenzene	103	% Rec	50

( ) = ESTIMATED CONCENTRATION

Semi-volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 20 Jun 94 2:13 pm
Data File: C:\F062094\6795F.D 5970 - MS Misc.
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Mon Jun 20 15:21:53 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 6777F.D cal50 = 6775F.D cal80 = 6778F.D
cal120 = 6779F.D cal160 = 6776F.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
2		N-nitroso-dimethylamine	1.18299	0.36513	69.1
3		Pyridine	0.91071	0.35924	60.6
4		2-Picoline	1.02043	0.93533	8.3
5	S	2-Fluorophenol	0.96498	1.02058	5.8
6		Aniline	2.01454	1.74131	13.6
7	S	Phenol-d5	1.44671	1.38143	4.5
8	MC	Phenol	1.66032	1.43200	13.8
9		bis(2-Chloroethyl)ether	1.76899	1.47483	16.6
10	S	2-Chlorophenol-d4	1.11141	1.14423	3.0
11	MC	2-Chlorophenol	1.20543	1.33489	10.7
12		1,3-Dichlorobenzene	1.21704	1.44418	18.7
13	MC	1,4-Dichlorobenzene	1.21020	1.50955	24.7
14	S	1,2-Dichlorobenzene-d4	1.15870	1.48374	28.1
15		1,2-Dichlorobenzene	1.08612	1.44682	33.2
16		Benzyl alcohol	0.66967	0.71429	6.7
17		2-Methylphenol	1.19194	1.05649	11.4
18		bis(2-chloroisopropyl)ether	5.67210	1.72305	69.6
19	MP	n-Nitroso-di-n-propylamine	1.91501	0.98441	48.6
20		4-Methylphenol	1.30226	1.12592	13.5
21		Hexachloroethane	0.64162	0.64352	0.3
22	I	Naphthalene-d8	1.00000	1.00000	0.0
23	S	Nitrobenzene-d5	0.50825	0.42427	16.5
24		Nitrobenzene	0.53807	0.42574	20.9
25		Isophorone	0.98950	0.76901	22.3
26	C	2-Nitrophenol	0.21867	0.24427	11.7
27		2,4-Dimethylphenol	0.36688	0.35657	2.8
28		bis(2-Chloroethoxy)methane	0.56528	0.51513	8.9
29	C	2,4-Dichlorophenol	0.28313	0.33526	18.4
30		Benzoic acid	0.23290	0.20314	12.8
31	M	1,2,4-Trichlorobenzene	0.27268	0.34748	27.4
32		Naphthalene	0.88823	1.13453	27.7
33		4-Chloroaniline	0.40804	0.48064	17.8
34		Toluenediamine	0.00756	0.00377	50.1
35	C	Hexachlorobutadiene	0.17640	0.19755	12.0
36	MC	4-Chloro-3-methylphenol	0.37683	0.31415	16.6
37		2-Methylnaphthalene	0.56156	0.70252	25.1
38	I	Acenaphthene-d10	1.00000	1.00000	0.0
39	P	Hexachlorocyclopentadiene	0.26016	0.33031	27.0
40		1,2,4,5-Tetrachlorobenzene	0.47166	0.60425	28.1
41	C	2,4,6-Trichlorophenol	0.34740	0.38966	12.2
42		2,4,5-Trichlorophenol	0.37704	0.43990	16.7
43	S	2-Fluorobiphenyl	0.97036	1.21814	25.5

Heritage Laboratory, Indianapolis
Semi-volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 20 Jun 94 2:13 pm
Data File: C:\F062094\6795F.D 5970 - MS Misc.
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Mon Jun 20 15:21:53 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 6777F.D cal50 = 6775F.D cal80 = 6778F.D
cal120 = 6779F.D cal160 = 6776F.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Chloronaphthalene	0.97616	1.21593	24.6
45		2-Nitroaniline	0.63306	0.39454	37.7
46		Dimethylphthalate	1.31660	1.40207	6.5
47		1,3-Dinitrobenzene	0.27244	0.26897	1.3
48		2,6-Dinitrotoluene	0.37890	0.38966	2.8
49		Acenaphthylene	1.67061	1.98792	19.0
50		3-Nitroaniline	0.36979	0.40553	9.7
51	MC	Acenaphthene	0.96064	1.20052	25.0
52	P	2,4-Dinitrophenol	0.10622	0.12479	17.5
53	MP	4-Nitrophenol	0.09682	0.10229	5.6
54		Dibenzofuran	1.30375	1.59488	22.3
55	M	2,4-Dinitrotoluene	0.47740	0.51381	7.6
56		2,3,4,6-Tetrachlorophenol	0.28359	0.27895	1.6
57		Diethylphthalate	1.39430	1.52610	9.5
58		Fluorene	0.88153	1.27628	44.8
59		4-Chlorophenyl-phenylether	0.47996	0.64823	35.1
60		4-Nitroaniline	0.35472	0.40394	13.9
61	I	Phenanthrene-d10	1.00000	1.00000	0.0
62		4,6-Dinitro-2-methylphenol	0.11955	0.14681	22.8
63	C	n-Nitrosodiphenylamine	0.39350	0.47019	19.5
64	S	2,4,6-Tribromophenol	0.15287	0.11383	25.5
65		Azobenzene	1.05297	0.91409	13.2
66		alpha-BHC	0.11795	0.12132	2.9
67		4-Bromophenyl-phenylether	0.19957	0.21778	9.1
68		Hexachlorobenzene	0.25385	0.22677	10.7
69		beta-BHC	0.08582	0.09278	8.1
70	MC	Pentachlorophenol	0.09915	0.09927	0.1
71		gamma-BHC	0.10661	0.10684	0.2
72		Phenanthrene	0.83588	1.08319	29.6
73		Anthracene	0.73857	1.14954	55.6
74		delta-BHC	0.06040	0.08472	40.3
75		Carbazole	0.59754	0.81166	35.8
76		Heptachlor	0.11755	0.10175	13.4
77		Di-n-butylphthalate	1.21501	1.50916	24.2
78		Aldrin	0.07807	0.07630	2.3
79		Heptachlor epoxide	0.04809	0.04275	11.1
80	C	Fluoranthene	0.88919	1.12675	26.7
81	I	Chrysene-d12	1.00000	1.00000	0.0
82		Benzidine	0.23782	0.32012	34.6
83	M	Pyrene	1.52853	1.50044	1.8
84		alpha-Endosulfan	0.04178	0.02986	28.5
85		p,p'-DDE	0.35115	0.24678	29.7
86	S	Terphenyl-d14	1.02434	0.95548	6.7

Semi-volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 20 Jun 94 2:13 pm
Data File: C:\F062094\6795F.D 5970 - MS Misc.
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Mon Jun 20 15:21:53 1994

. = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 6777F.D cal50 = 6775F.D cal80 = 6778F.D
cal120 = 6779F.D cal160 = 6776F.D

PK#	Compound	AvgRRF	CCRRF	%Dev
87	Dieldrin	0.38529	0.23962	37.8
88	Endrin	0.01501	0.01297	13.6
89	Endrin aldehyde	0.00094	0.00309	228.3
90	beta-Endosulfan	0.05703	0.04548	20.3
91	p,p'-DDD	0.49746	0.41709	16.2
92	Butylbenzylphthalate	0.81027	0.81478	0.6
93	Endosulfan sulfate	0.08872	0.07351	17.2
94	p,p'-DDT	0.43736	0.38286	12.5
95	Methoxychlor	0.66019	0.63861	3.3
96	Benzo[a]anthracene	1.03902	1.15613	4.2
97	3,3'-Dichlorobenzidine	0.27307	0.38717	41.8
98	Chrysene	0.98142	1.08668	15.9
99	bis(2-Ethylhexyl)phthalate	1.12461	1.11405	0.9
100 I	Perylene-d12	1.00000	1.00000	0.0
101 C	Di-n-octylphthalate	3.18409	2.96761	6.8
102	Benzo[b]fluoranthene	1.52098	1.58467	5.0
103	Benzo[k]fluoranthene	1.47624	1.61300	7.0
104 C	Benzo[a]pyrene	1.38191	1.49881	8.5
105	Indeno[1,2,3-cd]pyrene	1.25420	1.37355	9.5
106	Dibenz[a,h]anthracene	1.01868	1.16414	14.3
107	Benzo[g,h,i]perylene	1.05744	1.21230	14.6

(#) = Out of Range (Advisory for non-CCC)

HERITAGE LABORATORIES, INC
SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7682H SVL# 774-018

ANALYSIS DATE/TIME: 6/14/94 11:30

PREP DATE: 6/9/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

MASS SPEC FILE: >7682H

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
Pyrene.....	BDL	uG/L	10
Tetrachlorobenzenes.....	BDL	uG/L	10
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	47	% Rec	100
Phenol-d5.....	36	% Rec	100
Nitrobenzene-d5.....	61	% Rec	50
2-Fluorobiphenyl.....	66	% Rec	50
2,4,6-Tribromophenol.....	54	% Rec	100
Terphenyl-d14.....	75	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5780C Inj Time : 940608 05:53 ID File : CLPVOL::A2

Analyst : REGI Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.00470	93.21			(Conc=300.00)
Acrylonitrile	.39274	.41649	6.05			(Conc=300.00)
Chloromethane	1.19881	.87455	27.05		**	
Bromomethane	1.20277	1.16841	2.86			
Vinyl Chloride	.96821	.94594	2.30	*		
Dichlorodifluoromethane	1.48519	.84230	43.29			
Chloroethane	.71495	.66463	7.04			
Methylene Chloride	1.49886	1.37977	7.95			
Acetone	.77561	.75334	2.87			
Carbon Disulfide	2.50489	2.40163	4.12			
Trichlorofluoromethane	3.57785	3.06388	14.37			
1,1-Dichloroethene	1.05652	1.12506	6.49	*		
1,1-Dichloroethane	2.66445	2.96806	11.39		**	
[Tetrahydrofuran]	.53124	.44152	16.89			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	1.13740	13.49			(Conc=100.00)
Diethyl Ether	.63148	.82529	30.69			
Chloroform	3.40786	3.46402	1.65	*		
Trichloro-trifluoroethane	1.51530	1.96676	29.79			
1,2-Dichloroethane-d4	2.09459	2.17776	3.97			
2-Butanone	.93293	.85183	8.69			
1,2-Dichloroethane	2.52312	2.74399	8.75			
Methyl-t-butyl ether	1.00690	1.01637	.94			
1,1,1-Trichloroethane	.80579	.92762	15.12			
Carbon Tetrachloride	.82349	.96266	16.90			
Ethyl Acetate	.81490	.64615	20.71			
Vinyl Acetate	.54635	.49679	9.07			
Bromodichloromethane	1.26165	1.25143	.81			
1,2-Dichloropropane	.47484	.46702	1.65	*		
cis-1,3-Dichloropropene	.90845	.90372	.52			
Trichloroethene	.50286	.49558	1.45			
Diisopropyl Ether	1.34489	1.36167	1.25			
2-Chloroethyl Vinyl Ether	.24845	.24050	3.20			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5780C Inj Time : 940608 05:53 ID File : CLPVOL::A2

Analyst : REGI Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.15367	12.81			
1,1,2-Trichloroethane	.60604	.51316	15.33			
Benzene	.85252	.90997	6.74	*		
trans-1,3-Dichloropropene	.86673	.82888	4.37			
Bromoform	1.40695	1.11068	21.06		**	
4-Methyl-2-Pentanone	1.05398	.85773	18.62			
2-Hexanone	.88764	.63083	28.93			
Tetrachloroethene	.46761	.53789	15.03			
1,1,2,2-Tetrachloroethane	1.10359	1.18151	7.06		**	
Toluene-d8	.91651	1.00891	10.08			
Toluene	.60528	.69908	15.50	*		
Chlorobenzene	1.01544	1.07422	5.79		**	
Ethylbenzene	.42381	.48072	13.43	*		
Bromofluorobenzene	1.49381	1.41455	5.31			
Styrene	1.12330	1.14246	1.71			
m-Xylene	.58317	.59812	2.56			
o,p-Xylene	.57853	.60963	5.38			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.47407	3.77			
o,p-Dichlorobenzene	1.45240	1.43058	1.50			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5810C Inj Time : 940609 12:08 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.00921	86.71			(Conc=300.00)
Acrylonitrile	.39274	.27122	30.94			(Conc=300.00)
Chloromethane	1.19881	.67895	43.36		**	
Bromomethane	1.20277	1.14614	4.71			
Vinyl Chloride	.96821	.85486	11.71	*		
Dichlorodifluoromethane	1.48519	.48116	67.60			
Chloroethane	.71495	.60676	15.13			
Methylene Chloride	1.49886	1.43827	4.04			
Acetone	.77561	.66762	13.92			
Carbon Disulfide	2.50489	2.15234	14.07			
Trichlorofluoromethane	3.57785	3.14214	12.18			
1,1-Dichloroethene	1.05652	1.05572	.08	*		
1,1-Dichloroethane	2.66445	2.91561	9.43		**	
[Tetrahydrofuran]	.53124	.47651	10.30			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	1.13845	13.60			(Conc=100.00)
Diethyl Ether	.63148	.79087	25.24			
Chloroform	3.40786	3.41977	.35	*		
Trichloro-trifluoroethane	1.51530	1.74234	14.98			
1,2-Dichloroethane-d4	2.09459	2.07608	.88			
2-Butanone	.93293	.98635	5.73			
1,2-Dichloroethane	2.52312	2.81461	11.55			
Methyl-t-butyl ether	1.00690	1.07975	7.24			
1,1,1-Trichloroethane	.80579	1.01049	25.40			
Carbon Tetrachloride	.82349	.98940	20.15			
Ethyl Acetate	.81490	.77621	4.75			
Vinyl Acetate	.54635	.49241	9.87			
Bromodichloromethane	1.26165	1.37339	8.86			
1,2-Dichloropropane	.47484	.51434	8.32	*		
cis-1,3-Dichloropropene	.90845	.98997	8.97			
Trichloroethene	.50286	.53572	6.53			
Diisopropyl Ether	1.34489	1.45927	8.50			
2-Chloroethyl Vinyl Ether	.24845	.26500	6.66			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5810C Inj Time : 940609 12:08 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.31082	.93			
1,1,2-Trichloroethane	.60604	.60497	.18			
Benzene	.85252	1.00243	17.58	*		
trans-1,3-Dichloropropene	.86673	.92755	7.02			
Bromoform	1.40695	1.25764	10.61		**	
4-Methyl-2-Pentanone	1.05398	.97206	7.77			
2-Hexanone	.88764	.78794	11.23			
Tetrachloroethene	.46761	.57487	22.94			
1,1,2,2-Tetrachloroethane	1.10359	1.31781	19.41		**	
Toluene-d8	.91651	.99646	8.72			
Toluene	.60528	.72724	20.15	*		
Chlorobenzene	1.01544	1.16323	14.55		**	
Ethylbenzene	.42381	.49609	17.05	*		
Bromofluorobenzene	1.49381	1.60691	7.57			
Styrene	1.12330	1.21950	8.56			
m-Xylene	.58317	.64626	10.82			
o,p-Xylene	.57853	.65417	13.07			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.63629	6.82			
o,p-Dichlorobenzene	1.45240	1.59587	9.88			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE LABORATORIES, INC
VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >5811C

ANALYSIS DATE/TIME: 6/9/94 13:28

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST			spike conc
Dichloroethane-d4	100	% Rec	50
Toluene-d8	99	% Rec	50
Bromofluorobenzene	93	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5830C Inj Time : 940610 05:39 ID File : CLPVOL::A2

Analyst : HAROLD Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.01234	82.19			(Conc=300.00)
Acrylonitrile	.39274	.21461	45.36			(Conc=300.00)
Chloromethane	1.19881	.51587	56.97		**	
Bromomethane	1.20277	.93314	22.42			
Vinyl Chloride	.96821	.76319	21.17	*		
Dichlorodifluoromethane	1.48519	.67601	54.48			
Chloroethane	.71495	.51420	28.08			
Methylene Chloride	1.49886	1.25041	16.58			
Acetone	.77561	.43731	43.62			
Carbon Disulfide	2.50489	1.98027	20.94			
Trichlorofluoromethane	3.57785	2.71135	24.22			
1,1-Dichloroethene	1.05652	.91863	13.05	*		
1,1-Dichloroethane	2.66445	2.32359	12.79		**	
[Tetrahydrofuran]	.53124	.30680	42.25			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	1.15552	15.30			(Conc=100.00)
Diethyl Ether	.63148	.59016	6.54			
Chloroform	3.40786	3.50068	2.72	*		
Trichloro-trifluoroethane	1.51530	2.30919	52.39			
1,2-Dichloroethane-d4	2.09459	2.33501	11.48			
2-Butanone	.93293	.57029	38.87			
1,2-Dichloroethane	2.52312	2.73621	8.45			
Methyl-t-butyl ether	1.00690	.95131	5.52			
1,1,1-Trichloroethane	.80579	.89553	11.14			
Carbon Tetrachloride	.82349	.90786	10.25			
Ethyl Acetate	.81490	.46513	42.92			
Vinyl Acetate	.54635	.35013	35.91			
Bromodichloromethane	1.26165	1.18373	6.18			
1,2-Dichloropropane	.47484	.43799	7.76	*		
cis-1,3-Dichloropropene	.90845	.80410	11.49			
Trichloroethene	.50286	.47221	6.10			
Diisopropyl Ether	1.34489	1.40035	4.12			
2-Chloroethyl Vinyl Ether	.24845	.20409	17.86			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5830C Inj Time : 940610 05:39 ID File : CLPVOL::A2

Analyst : HAROLD Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.00409	24.11			
1,1,2-Trichloroethane	.60604	.45094	25.59			
Benzene	.85252	.83157	2.46	*		
trans-1,3-Dichloropropene	.86673	.70791	18.32			
Bromoform	1.40695	.81640	41.97		**	
4-Methyl-2-Pentanone	1.05398	.56442	46.45			
2-Hexanone	.88764	.38923	56.15			
Tetrachloroethene	.46761	.54294	16.11			
1,1,2,2-Tetrachloroethane	1.10359	.93334	15.43		**	
Toluene-d8	.91651	1.09330	19.29			
Toluene	.60528	.70546	16.55	*		
Chlorobenzene	1.01544	1.02617	1.06		**	
Ethylbenzene	.42381	.46041	8.64	*		
Bromofluorobenzene	1.49381	1.42723	4.46			
Styrene	1.12330	1.08790	3.15			
m-Xylene	.58317	.61012	4.62			
o,p-Xylene	.57853	.60895	5.26			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.25123	18.31			
o,p-Dichlorobenzene	1.45240	1.17957	18.78			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE LABORATORIES, INC

VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >5831C

ANALYSIS DATE/TIME: 6/10/94 6:52

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST			spike conc
Dichloroethane-d4	102	% Rec	50
Toluene-d8	103	% Rec	50
Bromofluorobenzene	94	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5850C Inj Time : 940611 07:14 ID File : CLPVOL::A2

Analyst : HAROLD Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.04681	32.46			(Conc=300.00)
Acrylonitrile	.39274	.54406	38.53			(Conc=300.00)
Chloromethane	1.19881	.78660	34.38		**	
Bromomethane	1.20277	1.03226	14.18			
Vinyl Chloride	.96821	.95280	1.59	*		
Dichlorodifluoromethane	1.48519	1.14128	23.16			
Chloroethane	.71495	.59882	16.24			
Methylene Chloride	1.49886	1.22375	18.36			
Acetone	.77561	.66059	14.83			
Carbon Disulfide	2.50489	2.38931	4.61			
Trichlorofluoromethane	3.57785	2.90149	18.90			
1,1-Dichloroethene	1.05652	1.01986	3.47	*		
1,1-Dichloroethane	2.66445	2.29008	14.05		**	
[Tetrahydrofuran]	.53124	.40999	22.82			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	1.06729	6.50			(Conc=100.00)
Diethyl Ether	.63148	.81002	28.27			
Chloroform	3.40786	3.22274	5.43	*		
Trichloro-trifluoroethane	1.51530	2.09667	38.37			
1,2-Dichloroethane-d4	2.09459	2.27865	8.79			
2-Butanone	.93293	.83399	10.61			
1,2-Dichloroethane	2.52312	2.59539	2.86			
Methyl-t-butyl ether	1.00690	.96162	4.50			
1,1,1-Trichloroethane	.80579	.90858	12.76			
Carbon Tetrachloride	.82349	.91706	11.36			
Ethyl Acetate	.81490	.58126	28.67			
Vinyl Acetate	.54635	.46054	15.71			
Bromodichloromethane	1.26165	1.11788	11.40			
1,2-Dichloropropane	.47484	.41660	12.27	*		
cis-1,3-Dichloropropene	.90845	.76348	15.96			
Trichloroethene	.50286	.46185	8.16			
Diisopropyl Ether	1.34489	1.28698	4.31			
2-Chloroethyl Vinyl Ether	.24845	.20320	18.21			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >5850C Inj Time : 940611 07:14 ID File : CLPVOL::A2

Analyst : HAROLD Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	.99887	24.51			
1,1,2-Trichloroethane	.60604	.44705	26.23			
Benzene	.85252	.82202	3.58	*		
trans-1,3-Dichloropropene	.86673	.68827	20.59			
Bromoform	1.40695	.89997	36.03		**	
4-Methyl-2-Pentanone	1.05398	.69909	33.67			
2-Hexanone	.88764	.59863	32.56			
Tetrachloroethene	.46761	.51439	10.00			
1,1,2,2-Tetrachloroethane	1.10359	1.01001	8.48		**	
Toluene-d8	.91651	1.04480	14.00			
Toluene	.60528	.65895	8.87	*		
Chlorobenzene	1.01544	.98013	3.48		**	
Ethylbenzene	.42381	.43248	2.04	*		
Bromofluorobenzene	1.49381	1.38600	7.22			
Styrene	1.12330	1.02206	9.01			
m-Xylene	.58317	.55844	4.24			
o,p-Xylene	.57853	.57600	.44			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.28934	15.83			
o,p-Dichlorobenzene	1.45240	1.25496	13.59			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0002B Inj Time : 940611 10:09 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.84256	.97263	15.44			(Conc=50.00)
Pyridine	1.30201	1.49976	15.19			
2-Picoline	1.35924	1.36271	.25			
2-Fluorophenol	1.35330	1.34188	.84			
Aniline	2.14993	2.03816	5.20			
Phenol-d6	1.69523	1.62279	4.27			
Phenol	1.90696	1.88916	.93	*		
bis(2-chloroethyl)ether	1.69999	1.69835	.10			
2-Chlorophenol-d4	1.44293	1.44987	.48			
2-Chlorophenol	1.49186	1.50347	.78			
1,3-Dichlorobenzene	1.49305	1.47928	.92			
1,4-Dichlorobenzene	1.56238	1.52158	2.61	*		
Benzyl alcohol	.99885	.96228	3.66			
1,2-Dichlorobenzene	1.50573	1.51885	.87			
1,2-Dichlorobenzene-d4	1.64007	1.65639	.99			
2-Methylphenol	1.30640	1.27704	2.25			
bis(2-chloroisopropyl)ether	1.22425	1.06446	13.05			
4-Methylphenol	1.41512	1.35636	4.15			
N-Nitroso-di-n-propylamine	1.04146	.99724	4.25		**	
Hexachloroethane	.61222	.60414	1.32			
Nitrobenzene-d5	.42069	.39054	7.17			
Nitrobenzene	.42052	.39834	5.27			
Isophorone	.83804	.79929	4.62			
2-Nitrophenol	.22334	.21149	5.31	*		
2,4-Dimethylphenol	.33140	.30275	8.65			
Benzoic acid	.23903	.18440	22.85			
bis(2-Chloroethoxy)methane	.56500	.53229	5.79			
2,4-Dichlorophenol	.31435	.30035	4.45	*		
1,2,4-Trichlorobenzene	.33237	.31301	5.83			
Naphthalene	1.06626	1.01503	4.80			
4-Chloroaniline	.44128	.40515	8.19			
Hexachlorobutadiene	.16990	.15760	7.24	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0002B Inj Time : 940611 10:09 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.28780	.25337	11.96	*	
2-Methylnaphthalene	.67377	.63498	5.76		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.69500	.69136	.52		
Hexachlorocyclopentadiene	.39414	.31644	19.71		**
2,4,6-Trichlorophenol	.48308	.43795	9.34	*	
2,4,5-Trichlorophenol	.44676	.44590	.19		
2-Chloronaphthalene	1.34742	1.32211	1.88		
2-Fluorobiphenyl	1.42872	1.37442	3.80		
2-Nitroaniline	.42669	.38984	8.64		
1,3-Dinitrobenzene	.27103	.24192	10.74		
Dimethylphthalate	1.35461	1.31557	2.88		
Acenaphthylene	2.08520	2.00629	3.78		
2,6-Dinitrotoluene	.36593	-	-		
3-Nitroaniline	.38221	.33655	11.95		
Acenaphthene	1.24416	1.17832	5.29	*	
2,4-Dinitrophenol	.19222	.17903	6.86		**
4-Nitrophenol	.10522	.10044	4.54		**
Dibenzofuran	1.74120	1.59554	8.37		
2,4-Dinitrotoluene	.41339	.38383	7.15		
2,3,4,6-Tetrachlorophenol	.27373	.26255	4.08		
Diethylphthalate	1.29835	1.28824	.78		
4-Chlorophenyl-phenylether	.61861	.57614	6.86		
Fluorene	1.27678	1.21899	4.53		
4-Nitroaniline	.34638	.31373	9.43		
2,4,6-Tribromophenol	.23533	.18837	19.95		
4,6-Dinitro-2-methylphenol	.14961	.14818	.96		
N-Nitrosodiphenylamine (1)	.53688	.50207	6.48	*	
4-Bromophenyl-phenylether	.26602	.25661	3.54		
Hexachlorobenzene	.36334	.34891	3.97		
Pentachlorophenol	.18250	.18006	1.34	*	
Phenanthrene	1.12453	1.06629	5.18		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0002B Inj Time : 940611 10:09 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07131	1.02600	4.23			
Carbazole	1.87347	1.89573	1.19			
Di-n-butylphthalate	1.16735	1.23666	5.94			
Fluoranthene	.88048	.88304	.29	*		
alpha-BHC	.13175	.11031	16.27			
beta-BHC	.09164	.07945	13.29			
gamma-BHC (Lindane)	.10315	.09425	8.63			
1,2-Diphenylhydrazine	1.13407	.97435	14.08			
delta-BHC	.08602	.08442	1.87			
Heptachlor	.12259	.12097	1.32			
Aldrin	.07743	.08299	7.18			
Heptachlor epoxide	.04202	.04503	7.16			
Benzidine	.34896	.22197	36.39			(Conc=50.00)
Pyrene	1.81463	1.74953	3.59			
Terphenyl-d14	1.29528	1.27331	1.70			
Butylbenzylphthalate	.69579	.63327	8.99			
3,3'-Dichlorobenzidine	.32470	.34027	4.80			
Benzo(a)anthracene	1.23970	1.35823	9.56			
Chrysene	1.11021	1.09287	1.56			
bis(2-Ethylhexyl)phthalate	.85402	.90074	5.47			
alpha-Endosulfan	.04003	.04627	15.59			
Dieldrin	.34806	.40611	16.68			
p,p'-DDE	.32820	.36003	9.70			
Endrin	.07853	.08824	12.36			
beta-Endosulfan	.04089	.03948	3.44			
p,p'-DDD	.51805	.52369	1.09			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.09785	.09544	2.46			
p,p'-DDT	.41062	.42423	3.31			
Di-n-octylphthalate	2.73569	2.32060	15.17	*		
Benzo(b)fluoranthene	1.88069	1.77410	5.67			
Benzo(k)fluoranthene	1.43352	1.20994	15.60			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 06/11/94

Contractor:

Time: 10:09

Contract No:

Laboratory ID: >0002B

Instrument ID: GCMS#2

Initial Calibration Date: 06/03/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34661	1.23732	8.12	*	
Indeno(1,2,3-cd)pyrene	.94233	.63496	32.62		
Dibenz(a,h)anthracene	.88238	.62042	29.69		
Benzo(g,h,i)perylene	.92510	.62389	32.56		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0055B Inj Time : 940615 12:38 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.84256	.55860	33.70			(Conc=50.00)
Pyridine	1.30201	.93995	27.81			
2-Picoline	1.35924	1.13239	16.69			
2-Fluorophenol	1.35330	1.23874	8.47			
Aniline	2.14993	1.88848	12.16			
Phenol-d6	1.69523	1.56841	7.48			
Phenol	1.90696	1.83104	3.98	*		
bis(2-chloroethyl)ether	1.69999	1.59319	6.28			
2-Chlorophenol-d4	1.44293	1.42645	1.14			
2-Chlorophenol	1.49186	1.47541	1.10			
1,3-Dichlorobenzene	1.49305	1.47633	1.12			
1,4-Dichlorobenzene	1.56238	1.57377	.73	*		
Benzyl alcohol	.99885	.94015	5.88			
1,2-Dichlorobenzene	1.50573	1.50546	.02			
1,2-Dichlorobenzene-d4	1.64007	1.62613	.85			
2-Methylphenol	1.30640	1.20496	7.76			
bis(2-chloroisopropyl)ether	1.22425	.98421	19.61			
4-Methylphenol	1.41512	1.30228	7.97			
N-Nitroso-di-n-propylamine	1.04146	.95668	8.14		**	
Hexachloroethane	.61222	.58778	3.99			
Nitrobenzene-d5	.42069	.36623	12.95			
Nitrobenzene	.42052	.36153	14.03			
Isophorone	.83804	.72326	13.70			
2-Nitrophenol	.22334	.20165	9.71	*		
2,4-Dimethylphenol	.33140	.27614	16.68			
Benzoic acid	.23903	.21037	11.99			
bis(2-Chloroethoxy)methane	.56500	.48346	14.43			
2,4-Dichlorophenol	.31435	.29598	5.84	*		
1,2,4-Trichlorobenzene	.33237	.31504	5.21			
Naphthalene	1.06626	1.03453	2.98			
4-Chloroaniline	.44128	.39249	11.06			
Hexachlorobutadiene	.16990	.16339	3.83	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0055B Inj Time : 940615 12:38 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.28780	.23680	17.72	*	
2-Methylnaphthalene	.67377	.61158	9.23		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.69500	.74701	7.48		
Hexachlorocyclopentadiene	.39414	.25541	35.20		**
2,4,6-Trichlorophenol	.48308	.46662	3.41	*	
2,4,5-Trichlorophenol	.44676	.43419	2.81		
2-Chloronaphthalene	1.34742	1.33796	.70		
2-Fluorobiphenyl	1.42872	1.42879	.00		
2-Nitroaniline	.42669	.38420	9.96		
1,3-Dinitrobenzene	.27103	.25641	5.40		
Dimethylphthalate	1.35461	1.39516	2.99		
Acenaphthylene	2.08520	2.05604	1.40		
2,6-Dinitrotoluene	.36593	.29427	19.58		
3-Nitroaniline	.38221	.37540	1.78		
Acenaphthene	1.24416	1.21795	2.11	*	
2,4-Dinitrophenol	.19222	.19522	1.56		**
4-Nitrophenol	.10522	.12253	16.46		**
Dibenzofuran	1.74120	1.66540	4.35		
2,4-Dinitrotoluene	.41339	.40332	2.44		
2,3,4,6-Tetrachlorophenol	.27373	.28502	4.13		
Diethylphthalate	1.29835	1.35275	4.19		
4-Chlorophenyl-phenylether	.61861	.61626	.38		
Fluorene	1.27678	1.25065	2.05		
4-Nitroaniline	.34638	.35482	2.44		
2,4,6-Tribromophenol	.23533	.21116	10.27		
4,6-Dinitro-2-methylphenol	.14961	.14982	.13		
N-Nitrosodiphenylamine (1)	.53688	.48946	8.83	*	
4-Bromophenyl-phenylether	.26602	.24749	6.97		
Hexachlorobenzene	.36334	.34077	6.21		
Pentachlorophenol	.18250	.18531	1.54	*	
Phenanthrene	1.12453	1.08878	3.18		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0055B Inj Time : 940615 12:38 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07131	1.00210	6.46			
Carbazole	1.87347	1.93069	3.05			
Di-n-butylphthalate	1.16735	1.17238	.43			
Fluoranthene	.88048	.88533	.55	*		
alpha-BHC	.13175	.12540	4.82			
beta-BHC	.09164	.09202	.42			
gamma-BHC (Lindane)	.10315	.09507	7.84			
1,2-Diphenylhydrazine	1.13407	.92192	18.71			
delta-BHC	.08602	.08359	2.83			
Heptachlor	.12259	.11680	4.72			
Aldrin	.07743	.08025	3.63			
Heptachlor epoxide	.04202	.04428	5.38			
Benzidine	.34896	.23661	32.20			(Conc=50.00)
Pyrene	1.81463	1.53728	15.28			
Terphenyl-d14	1.29528	1.09840	15.20			
Butylbenzylphthalate	.69579	.54957	21.01			
3,3'-Dichlorobenzidine	.32470	.35165	8.30			
Benzo(a)anthracene	1.23970	1.33889	8.00			
Chrysene	1.11021	.91663	17.44			
bis(2-Ethylhexyl)phthalate	.85402	.77832	8.86			
alpha-Endosulfan	.04003	.04099	2.40			
Dieldrin	.34806	.30607	12.06			
p,p'-DDE	.32820	.30987	5.58			
Endrin	.07853	.06883	12.35			
beta-Endosulfan	.04089	.03403	16.78			
p,p'-DDD	.51805	.45745	11.70			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.09785	.08446	13.68			
p,p'-DDT	.41062	.35946	12.46			
Di-n-octylphthalate	2.73569	2.37711	13.11	*		
Benzo(b)fluoranthene	1.88069	2.03279	8.09			
Benzo(k)fluoranthene	1.43352	1.21399	15.31			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Contractor:

Contract No:

Instrument ID: GCMS#2

Calibration Date: 06/15/94

Time: 12:38

Laboratory ID: >0055B

Initial Calibration Date: 06/03/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34661	1.39418	3.53	*	
Indeno(1,2,3-cd)pyrene	.94233	.80171	14.92		
Dibenz(a,h)anthracene	.88238	.77229	12.48		
Benzo(g,h,i)perylene	.92510	.85318	7.77		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0069B Inj Time : 940616 08:46 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.84256	.86040	2.12			(Conc=50.00)
Pyridine	1.30201	1.39864	7.42			
2-Picoline	1.35924	1.32565	2.47			
2-Fluorophenol	1.35330	1.32538	2.06			
Aniline	2.14993	1.89117	12.04			
Phenol-d6	1.69523	1.60731	5.19			
Phenol	1.90696	1.86900	1.99	*		
bis(2-chloroethyl)ether	1.69999	1.65777	2.48			
2-Chlorophenol-d4	1.44293	1.42069	1.54			
2-Chlorophenol	1.49186	1.44856	2.90			
1,3-Dichlorobenzene	1.49305	1.44488	3.23			
1,4-Dichlorobenzene	1.56238	1.51166	3.25	*		
Benzyl alcohol	.99885	.92212	7.68			
1,2-Dichlorobenzene	1.50573	1.47822	1.83			
1,2-Dichlorobenzene-d4	1.64007	1.60439	2.18			
2-Methylphenol	1.30640	1.21337	7.12			
bis(2-chloroisopropyl)ether	1.22425	1.05815	13.57			
4-Methylphenol	1.41512	1.30645	7.68			
N-Nitroso-di-n-propylamine	1.04146	.97813	6.08		**	
Hexachloroethane	.61222	.53905	11.95			
Nitrobenzene-d5	.42069	.38093	9.45			
Nitrobenzene	.42052	.39074	7.08			
Isophorone	.83804	.73162	12.70			
2-Nitrophenol	.22334	.20768	7.01	*		
2,4-Dimethylphenol	.33140	.27795	16.13			
Benzoic acid	.23903	.21132	11.59			
bis(2-Chloroethoxy)methane	.56500	.50323	10.93			
2,4-Dichlorophenol	.31435	.30238	3.81	*		
1,2,4-Trichlorobenzene	.33237	.31021	6.67			
Naphthalene	1.06626	1.04223	2.25			
4-Chloroaniline	.44128	.38600	12.53			
Hexachlorobutadiene	.16990	.16475	3.03	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0069B Inj Time : 940616 08:46 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.28780	.24426	15.13	*	
2-Methylnaphthalene	.67377	.61900	8.13		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.69500	.67351	3.09		
Hexachlorocyclopentadiene	.39414	.10406	73.60		**
2,4,6-Trichlorophenol	.48308	.43801	9.33	*	
2,4,5-Trichlorophenol	.44676	.43147	3.42		
2-Chloronaphthalene	1.34742	1.28510	4.62		
2-Fluorobiphenyl	1.42872	1.34892	5.59		
2-Nitroaniline	.42669	.38914	8.80		
1,3-Dinitrobenzene	.27103	.24433	9.85		
Dimethylphthalate	1.35461	1.24726	7.93		
Acenaphthylene	2.08520	2.06297	1.07		
2,6-Dinitrotoluene	.36593	.29996	18.03		
3-Nitroaniline	.38221	.34948	8.56		
Acenaphthene	1.24416	1.20040	3.52	*	
2,4-Dinitrophenol	.19222	.18448	4.03		**
4-Nitrophenol	.10522	.09880	6.10		**
Dibenzofuran	1.74120	1.62882	6.45		
2,4-Dinitrotoluene	.41339	.38948	5.78		
2,3,4,6-Tetrachlorophenol	.27373	.26679	2.54		
Diethylphthalate	1.29835	1.20467	7.22		
4-Chlorophenyl-phenylether	.61861	.59697	3.50		
Fluorene	1.27678	1.19302	6.56		
4-Nitroaniline	.34638	.30875	10.86		
2,4,6-Tribromophenol	.23533	.18583	21.03		
4,6-Dinitro-2-methylphenol	.14961	.14058	6.04		
N-Nitrosodiphenylamine (1)	.53688	.51196	4.64	*	
4-Bromophenyl-phenylether	.26602	.26035	2.13		
Hexachlorobenzene	.36334	.34269	5.68		
Pentachlorophenol	.18250	.17684	3.10	*	
Phenanthrene	1.12453	1.04664	6.93		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0069B Inj Time : 940616 08:46 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940603 08:13

Calibration
Data Files: 20 uG/mL->9876B 50 uG/mL->9875B 80 uG/mL->9877B
120 uG/mL->9878B 160 uG/mL->9879B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07131	.99770	6.87			
Carbazole	1.87347	1.84564	1.49			
Di-n-butylphthalate	1.16735	1.14442	1.96			
Fluoranthene	.88048	.86172	2.13	*		
alpha-BHC	.13175	.13010	1.25			
beta-BHC	.09164	.08562	6.56			
gamma-BHC (Lindane)	.10315	.09625	6.69			
1,2-Diphenylhydrazine	1.13407	1.14010	.53			
delta-BHC	.08602	.08005	6.94			
Heptachlor	.12259	.10742	12.38			
Aldrin	.07743	.08099	4.60			
Heptachlor epoxide	.04202	.04397	4.63			
Benzidine	.34896	.22354	35.94			(Conc=50.00)
Pyrene	1.81463	1.56486	13.76			
Terphenyl-d14	1.29528	1.13237	12.58			
Butylbenzylphthalate	.69579	.58591	15.79			
3,3'-Dichlorobenzidine	.32470	.32013	1.41			
Benzo(a)anthracene	1.23970	1.14332	7.77			
Chrysene	1.11021	1.00032	9.90			
bis(2-Ethylhexyl)phthalate	.85402	.74844	12.36			
alpha-Endosulfan	.04003	.03959	1.10			
Dieldrin	.34806	.30092	13.54			
p,p'-DDE	.32820	.30473	7.15			
Endrin	.07853	.06745	14.11			
beta-Endosulfan	.04089	.03495	14.53			
p,p'-DDD	.51805	.56795	9.63			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.09785	.08831	9.75			
p,p'-DDT	.41062	.17587	57.17			
Di-n-octylphthalate	2.73569	3.19414	16.76	*		
Benzo(b)fluoranthene	1.88069	1.82833	2.78			
Benzo(k)fluoranthene	1.43352	1.70982	19.27			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 06/16/94

Contractor:

Time: 08:46

Contract No:

Laboratory ID: >0069B

Instrument ID: GCMS#2

Initial Calibration Date: 06/03/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34661	1.30896	2.80	*	
Indeno(1,2,3-cd)pyrene	.94233	.88294	6.30		
Dibenz(a,h)anthracene	.88238	.82825	6.13		
Benzo(g,h,i)perylene	.92510	.87263	5.67		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE
VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >5781C

ANALYSIS DATE/TIME: 6/8/94 7:03

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST			spike conc
Dichloroethane-d4	96	% Rec	50
Toluene-d8	101	% Rec	50
Bromofluorobenzene	112	% Rec	50

( ) = ESTIMATED CONCENTRATION

HERITAGE LABORATORIES, INC

SEMI-VOLATILES ANALYSIS-SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >0006B SVL# 776-752

ANALYSIS DATE/TIME: 6/11/94 13:11

PREP DATE: 6/9/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene.....	BDL	uG/KG	330
Acenapthylene.....	BDL	uG/KG	330
Anthracene.....	BDL	uG/KG	330
Benz(a)anthracene.....	BDL	uG/KG	330
Benzo(a)pyrene.....	BDL	uG/KG	330
Benzo(b)fluoranthene.....	BDL	uG/KG	330
Benzo(ghi)perylene.....	BDL	uG/KG	330
Benzo(k)fluoranthene.....	BDL	uG/KG	330
Benzyl Alcohol.....	BDL	uG/KG	330
Benzylbutylphthalate.....	BDL	uG/KG	330
Bis(2-chloroethoxy)methane.....	BDL	uG/KG	330
Bis(2-chloroethyl)ether.....	BDL	uG/KG	330
Bis(2-chloroisopropyl)ether....	BDL	uG/KG	330
Bis(2-ethylhexyl)phthalate.....	BDL	uG/KG	330
4-Bromophenylphenylether.....	BDL	uG/KG	330
Carbazole.....	BDL	uG/KG	330
4-Chloroaniline.....	BDL	uG/KG	330
2-Chloronaphthalene.....	BDL	uG/KG	330
4-Chlorophenylphenylether.....	BDL	uG/KG	330
Chrysene.....	BDL	uG/KG	330
Dibenz(a,h)anthracene.....	BDL	uG/KG	330
Dibenzofuran.....	BDL	uG/KG	330
1,2-Dichlorobenzene.....	BDL	uG/KG	330
1,3-Dichlorobenzene.....	BDL	uG/KG	330
1,4-Dichlorobenzene.....	BDL	uG/KG	330
3,3' -Dichlorobenzidine.....	BDL	uG/KG	660
Diethylphthalate.....	BDL	uG/KG	330
Dimethylphthalate.....	BDL	uG/KG	330
Di-n-butylphthalate.....	BDL	uG/KG	330
Dinitrobenzenes.....	BDL	uG/KG	1600
2,4-Dinitrotoluene.....	BDL	uG/KG	330
2,6-Dinitrotoluene.....	BDL	uG/KG	330
Di-n-octylphthalate.....	BDL	uG/KG	330
Fluoranthene.....	BDL	uG/KG	330
Fluorene.....	BDL	uG/KG	330
Hexachlorobenzene.....	BDL	uG/KG	330
Hexachlorobutadiene.....	BDL	uG/KG	330
Hexachlorocyclopentadiene.....	BDL	uG/KG	330
Hexachloroethane.....	BDL	uG/KG	330
Indeno(1,2,3-cd)pyrene.....	BDL	uG/KG	330
Isophorone.....	BDL	uG/KG	330
2-Methylnaphthalene.....	BDL	uG/KG	330
Naphthalene.....	BDL	uG/KG	330

MASS SPEC FILE: >0006B

2-Nitroaniline.....	BDL	uG/KG	1600
3-Nitroaniline.....	BDL	uG/KG	1600
4-Nitroaniline.....	BDL	uG/KG	1600
Nitrobenzene.....	BDL	uG/KG	330
N-Nitroso-diphenylamine.....	BDL	uG/KG	330
N-Nitroso-di-n-propylamine.....	BDL	uG/KG	330
Phenanthrene.....	BDL	uG/KG	330
2-Picoline.....	BDL	uG/KG	1600
Pyrene.....	BDL	uG/KG	330
Pyridine.....	BDL	uG/KG	1600
Tetrachlorobenzenes.....	BDL	uG/KG	330
Toluenediamine.....	BDL	uG/KG	1600
1,2,4-Trichlorobenzene.....	BDL	uG/KG	330
Benzoic Acid.....	BDL	uG/KG	1600
4-Chloro-3-methylphenol.....	BDL	uG/KG	330
2-Chlorophenol.....	BDL	uG/KG	330
2,4-Dichlorophenol.....	BDL	uG/KG	330
2,4-Dimethylphenol.....	BDL	uG/KG	330
4,6-Dinitro-2-methylphenol.....	BDL	uG/KG	1600
2,4-Dinitrophenol.....	BDL	uG/KG	1600
2-Methylphenol.....	BDL	uG/KG	330
4-Methylphenol.....	BDL	uG/KG	330
2-Nitrophenol.....	BDL	uG/KG	330
4-Nitrophenol.....	BDL	uG/KG	1600
Pentachlorophenol.....	BDL	uG/KG	1600
Phenol.....	BDL	uG/KG	330
Tetrachlorophenol.....	BDL	uG/KG	330
2,4,5-Trichlorophenol.....	BDL	uG/KG	1600
2,4,6-Trichlorophenol.....	BDL	uG/KG	330

SURROGATE LIST			spike conc
2-Fluorophenol.....	30	% Rec	3300
Phenol-d5.....	33	% Rec	3300
Nitrobenzene-d5.....	27	% Rec	1600
2-Fluorobiphenyl.....	31	% Rec	1600
2,4,6-Tribromophenol.....	36	% Rec	3300
Terphenyl-d14.....	26	% Rec	1600

( ) = ESTIMATED CONCENTRATION

HERITAGE

VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >5851C

ANALYSIS DATE/TIME: 6/11/94 8:28

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST		
Dichloroethane-d4	92	% Rec
Toluene-d8	96	% Rec
Bromofluorobenzene	114	% Rec

( ) = ESTIMATED CONCENTRATION

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

Rec'd CRA

QUALITY ASSURANCE REPORT PACKAGE #1934
CONESTOGA-ROVER & ASSOCIATES, INC.

DEBBIE GAGE
CONESTOGA-ROVER & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD SUITE 103
ROSEMONT, IL 60018
(708) 299-9933

SAMPLE # A320790, A320792-A320793

PREPARED BY: HERITAGE ENVIRONMENTAL SERVICES, INC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
(317) 243-8304

APPROVED BY: _____
PROJECT CHEMIST

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

A320790

REFERENCE NUMBER: 5369

PROJECT NAME: 4 City Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TCL SVOC	TCL PEST/PCB	TAL Metals	TAL CN						REMARKS
	8/30/94	1200	SW-083094-KJJ-111	water	6	✓	✓	✓	✓						

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [signature]	DATE: 08/30/94 TIME: 1430	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 7115097246 2

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Yellow - Receiving Laboratory Copy
Pink - Shipper Copy
Goldenrod - Sampler Copy

SAMPLE TEAM: John Bolcar

RECEIVED FOR LABORATORY BY: Kim Senmcaf

DATE: 31/Aug/94 TIME: 0940

N(3269

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road – Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

A320792

REFERENCE NUMBER: 5369

PROJECT NAME: 4 City Landfill

SAMPLER'S SIGNATURE: [illegible]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	TCL SVOC	TCL PESTICIDES	TAL METALS	TAL CN	TVOC					REMARKS
	8/3/94	0850	SW-083094-KJJ-106	water	6	✓	✓	✓	✓	✓					

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [illegible]	DATE: 8/30/94 TIME: 1630	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

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SAMPLE TEAM: [illegible]

RECEIVED FOR LABORATORY BY: Kim Schumacher

DATE: 31 Aug 94 TIME: 1046

N° 3271

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road – Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

A320793

REFERENCE NUMBER: 5369

PROJECT NAME: 4 City Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TCL SVOC	TCL PESTICIDES	TAL METALS	TPH CN	REMARKS
	8/30/94	1115	SW-083094-KJJ-110	water	6	-	-	-	-	
			TOTAL NUMBER OF CONTAINERS		6					

RELINQUISHED BY: ① [signature]	DATE: 8/30/94 TIME: 1450	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 7115077241

White – Fully Executed Copy
Yellow – Receiving Laboratory Copy
Pink – Shipper Copy
Goldenrod – Sampler Copy

SAMPLE TEAM: Johnson [signature]

RECEIVED FOR LABORATORY BY: Kim Johnson

DATE: 30 Aug 94 TIME: 1047

3270

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A320790, A320792-A320793

These samples were analyzed for Total Cyanide Distillation (SW846-9010A) and Total Cyanide (SW846-9012) using normal procedures with no modifications.

The Control Limits are 75-125% recovery and 20% RPD.

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
9/23/94

Recycled Paper

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GC/MS SEMI-VOLATILES
SAMPLES A320790, 792-793

There were no QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

Recycled Paper

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0841B Inj Time : 940907 13:21 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration
Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.32645	.34213	4.80	*	
2-Methylnaphthalene	.96402	.95318	1.12		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.59660	.55212	7.46		
Hexachlorocyclopentadiene	.33703	.17926	46.81		**
2,4,6-Trichlorophenol	.43781	.41786	4.56	*	
2,4,5-Trichlorophenol	.42518	.42007	1.20		
2-Chloronaphthalene	1.33818	1.31462	1.76		
2-Fluorobiphenyl	1.42488	1.33664	6.19		
2-Nitroaniline	.48837	.53673	9.90		
1,3-Dinitrobenzene	.26882	.25881	3.72		
Dimethylphthalate	1.39798	1.49030	6.60		
Acenaphthylene	2.28008	2.20405	3.33		
2,6-Dinitrotoluene	.31460	.36273	15.30		
3-Nitroaniline	.39796	.43157	8.45		
Acenaphthene	1.38365	1.39847	1.07	*	
2,4-Dinitrophenol	.19375	.16524	14.72		**
4-Nitrophenol	.13463	.13597	1.00		**
Dibenzofuran	1.81135	1.76916	2.33		
2,4-Dinitrotoluene	.42796	.42202	1.39		
2,3,4,6-Tetrachlorophenol	.25265	.25262	.01		
Diethylphthalate	1.46013	1.62359	11.19		
4-Chlorophenyl-phenylether	.64338	.62854	2.31		
Fluorene	1.45180	1.43564	1.11		
4-Nitroaniline	.35875	.41727	16.31		
2,4,6-Tribromophenol	.15715	.14433	8.16		
4,6-Dinitro-2-methylphenol	.13741	.12174	11.40		
N-Nitrosodiphenylamine (1)	.50905	.55354	8.74	*	
4-Bromophenyl-phenylether	.23001	.19696	14.37		
Hexachlorobenzene	.27702	.24504	11.54		
Pentachlorophenol	.13182	.13233	.39	*	
Phenanthrene	1.30775	1.26478	3.29		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0841B Inj Time : 940907 13:21 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration
Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	1.09890	.97396	11.37			(Conc=50.00)
Pyridine	1.55128	1.40821	9.22			
2-Picoline	1.39469	1.42829	2.41			
2-Fluorophenol	1.40762	1.49274	6.05			
Aniline	2.24127	2.36765	5.64			
Phenol-d6	1.89705	2.03650	7.35			
Phenol	2.27531	2.42287	6.48	*		
bis(2-chloroethyl)ether	1.98367	2.13869	7.81			
2-Chlorophenol-d4	1.48901	1.52431	2.37			
2-Chlorophenol	1.61605	1.67417	3.60			
1,3-Dichlorobenzene	1.52211	1.66290	9.25			
1,4-Dichlorobenzene	1.60362	1.62266	1.19	*		
Benzyl alcohol	1.08784	1.19464	9.82			
1,2-Dichlorobenzene	1.57840	1.77847	12.68			
1,2-Dichlorobenzene-d4	1.66601	1.84183	10.55			
2-Methylphenol	1.46847	1.56163	6.34			
bis(2-chloroisopropyl)ether	1.76172	1.92551	9.30			
4-Methylphenol	1.61390	1.79919	11.48			
N-Nitroso-di-n-propylamine	1.32972	1.46043	9.83		**	
Hexachloroethane	.72294	.75722	4.74			
Nitrobenzene-d5	.45490	.46826	2.94			
Nitrobenzene	.45174	.46333	2.57			
Isophorone	.92855	.94437	1.70			
2-Nitrophenol	.22280	.21654	2.81	*		
2,4-Dimethylphenol	.36264	.33848	6.66			
Benzoic acid	.23741	.26181	10.28			
bis(2-Chloroethoxy)methane	.62503	.61611	1.43			
2,4-Dichlorophenol	.30965	.31209	.79	*		
1,2,4-Trichlorobenzene	.31623	.28998	8.30			
Naphthalene	1.16936	1.14927	1.72			
4-Chloroaniline	.45037	.44583	1.01			
Hexachlorobutadiene	.16091	.15094	6.20	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0841B Inj Time : 940907 13:21 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration
Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.14815	1.08151	5.80			
Carbazole	1.91461	2.05586	7.38			
Di-n-butylphthalate	1.34047	1.50523	12.29			
Fluoranthene	.91004	1.00282	10.20	*		
alpha-BHC	.13330	.12226	8.28			
beta-BHC	.08994	.09736	8.25			
gamma-BHC (Lindane)	.10791	.09794	9.24			
1,2-Diphenylhydrazine	1.35135	1.32371	2.05			
delta-BHC	.08914	.09274	4.04			
Heptachlor	.10929	.09583	12.31			
Aldrin	.07512	.06889	8.29			
Heptachlor epoxide	.04783	.05447	13.88			
Benzidine	.34981	.21138	39.57			(Conc=50.00)
Pyrene	2.40684	1.87212	22.22			
Terphenyl-d14	1.36351	1.24224	8.89			
Butylbenzylphthalate	.82507	.93096	12.83			
3,3'-Dichlorobenzidine	.36142	.41814	15.69			
Benzo(a)anthracene	1.57311	1.74684	11.04			
Chrysene	1.03205	1.01629	1.53			
bis(2-Ethylhexyl)phthalate	1.08766	1.20425	10.72			
alpha-Endosulfan	.05288	.03946	25.38			
Dieldrin	.53411	.44038	17.55			
p,p'-DDE	.39464	.32213	18.37			
Endrin	.08716	.07297	16.28			
beta-Endosulfan	.04584	.04503	1.77			
p,p'-DDD	.53489	.52838	1.22			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.08544	.08491	.62			
p,p'-DDT	.44380	.43334	2.36			
Di-n-octylphthalate	2.50408	2.85657	14.08	*		
Benzo(b)fluoranthene	1.75296	2.26007	28.93			
Benzo(k)fluoranthene	1.17111	1.23602	5.54			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 09/07/94

Contractor:

Time: 13:21

Contract No:

Laboratory ID: >0841B

Instrument ID: GCMS#2

Initial Calibration Date: 09/03/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34485	1.27507	5.19	*	
Indeno(1,2,3-cd)pyrene	.92078	.73636	20.03		
Dibenz(a,h)anthracene	.86391	.86210	.21		
Benzo(g,h,i)perylene	.94809	.85516	9.80		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE LABORATORIES, INC

SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >0834B SVL# 825-145

ANALYSIS DATE/TIME: 9/6/94 22:37

PREP DATE: 9/6/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzyl Alcohol	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
Dinitrobenzenes	BDL	uG/L	50
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

MASS SPEC FILE: >0834B

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
2-Picoline.....	BDL	uG/L	50
Pyrene.....	BDL	uG/L	10
Pyridine.....	BDL	uG/L	50
Tetrachlorobenzenes.....	BDL	uG/L	10
Toluenediamine.....	BDL	uG/L	50
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
Benzoic Acid.....	BDL	uG/L	50
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	72	% Rec	100
Phenol-d5.....	45	% Rec	100
Nitrobenzene-d5.....	115	% Rec	50
2-Fluorobiphenyl.....	107	% Rec	50
2,4,6-Tribromophenol.....	141	% Rec	100
Terphenyl-d14.....	113	% Rec	50

( ) = ESTIMATED CONCENTRATION

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

QUALITY ASSURANCE REPORT PACKAGE #1937 & 1941
CONESTOGA-ROVER & ASSOCIATES, INC.

DEBBIE GAGE
CONESTOGA-ROVER & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD SUITE 103
ROSEMONT, IL 60018
(708) 299-9933

HERITAGE # A320964-A320972
A321112

PREPARED BY: HERITAGE ENVIRONMENTAL SERVICES, INC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
(317) 243-8304

APPROVED BY: _____
PROJECT CHEMIST

Recycled Paper

CRA
ONESTOGA-ROVERS & ASSOCIATES
1400 West Higgins Road - Suite 103
Lisemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5307

PROJECT NAME: 4 City Coal Pile

SAMPLER'S SIGNATURE: [illegible]

PRINTED NAME: [illegible]

LAB No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	TCL VOX	TCL SVOC	TCL PESTICIDES	TAL METALS	TAL CN	TOC					REMARKS
	8/30/94	1850	SW-083094-KJJ-106	water	2	✓										A320963
		0950	D-083094-KJJ-107	sediment	2	✓	✓	✓	✓	✓	✓					A320967
		0950	D-083094-KJJ-108	↓	2	✓	✓	✓	✓	✓	✓					970
		1025	D-083094-KJJ-109	↓	2	✓	✓	✓	✓	✓	✓					971
		1115	SW-083094-KJJ-110	water	2	✓										A320966
		1200	SW-083094-KJJ-111	water	2	✓										967
			~~TRIP BLANK SW-083094-KJJ-112~~	water	1	✓										TRIP BLANK A320[illegible]
		1600	D-083094-KJJ-113	sediment	2	✓	✓	✓	✓	✓	✓					A320972
		1735	SW-083094-KJJ-114	water	2	✓										A320964

TOTAL NUMBER OF CONTAINERS 22 19

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
① [illegible] 8/31/94 1200	8/31/94	1430	②		
RELINQUISHED BY: ②			RECEIVED BY: ③		
RELINQUISHED BY: ③			RECEIVED BY: ④		

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. ~~[illegible]~~ 7115099261

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SAMPLE TEAM: [illegible]

RECEIVED FOR LABORATORY BY: [illegible]

DATE: [illegible] TIME:

1001(FORMS)-APRIL 29, 93-REV 0 (C)(F-01)

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 53681

PROJECT NAME: 4 City Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Kevin Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: TCL SVOC	TCL VOC	TAL Metals	TAL CN						REMARKS
	8/30/99	1735	SLU-083099-KJJ-114	water	6	✓	✓	✓	✓						A320964
TOTAL NUMBER OF CONTAINERS					6										

RELINQUISHED BY: ① [signature]	DATE: 8/31/99 TIME: 1200	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 7116099261

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Yellow - Receiving Laboratory Copy
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Goldenrod - Sampler Copy

SAMPLE TEAM: [illegible]

RECEIVED FOR LABORATORY BY: [illegible]

DATE: 9/1/99 TIME:

1001(FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

CRA

CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299 9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5362

PROJECT NAME: Four Corners [illegible]

SAMPLER'S SIGNATURE: [illegible]

PRINTED NAME: [illegible]

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS										REMARKS
11	7/1/94	1925	GW180194-LP-C114	Water	9	X	X	X	X	X	X	X	X			A321112
			TOTAL NUMBER OF CONTAINERS		9											

SAMPLE PRESERVATION OK

RELINQUISHED BY: ① [illegible]	DATE: 9/1/94 TIME: 1200	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④ [illegible]	DATE: TIME: 9/1/94

METHOD OF SHIPMENT: FedEx

AIR BILL No. 9135131[illegible]

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Goldenrod - Sampler Copy

SAMPLE TEAM: [illegible]

RECEIVED FOR LABORATORY BY:

DATE: TIME:

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299 9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): [illegible]

REFERENCE NUMBER: 53[illegible]

PROJECT NAME: [illegible]

SAMPLER'S SIGNATURE: [illegible]

PRINTED NAME: [illegible]

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS											REMARKS
11	[illegible]	[illegible]	[illegible]	[illegible]	9	X	X	X	X	X	X	X	X				A321112[illegible]

TOTAL NUMBER OF CONTAINERS: 9

SAMPLE PRESERVATION OK [illegible]

RELINQUISHED BY: (1) [illegible]	DATE: [illegible] TIME: [illegible]	RECEIVED BY: (2) DATE: TIME:
RELINQUISHED BY: (2)	DATE: TIME:	RECEIVED BY: (3) DATE: TIME:
RELINQUISHED BY: (3)	DATE: TIME:	RECEIVED BY: (4) [illegible] DATE: [illegible] TIME: [illegible]

METHOD OF SHIPMENT: [illegible] AIR BILL No. [illegible]

White: Fully Executed Copy Yellow: Receiving Laboratory Copy Pink: Shipper Copy Goldenrod: Sampler Copy	SAMPLE TEAM: [illegible]	RECEIVED FOR LABORATORY BY: DATE: TIME:

EMS LABORATORIES, INC.

HERITAGE

7901 West Morris Street
Indianapolis, IN 46231
Phone 317 243-0811
FAX 317 243-0360

CASE NARRATIVE
METALS SECTION

SAMPLE # A320964

THESE SAMPLES WERE ANALYZED USING THE NORMAL PROCEDURES WITH NO MODIFICATIONS.

Steven J Endersen 9-23-94
STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

CASE NARRATIVE

METALS SECTION

SAMPLE # A320969-972

The QC Sample was not homogeneous for K. and had matrix interference for Sb. The RPD for K. and the spike recovery for Sb. was bad for two digestions.

Steven J. Endersen 9-20-94

Steven J Endersen. Senior Chemist

EMS LABORATORIES, INC.

HERITAGE

7901 West Morris Street
Indianapolis, IN 46231
Phone 317 243-0811
FAX 317 243-0360

CASE NARRATIVE
METALS SECTION

SAMPLE # H32112

THESE SAMPLES WERE ANALYZED USING THE NORMAL PROCEDURES WITH NO MODIFICATIONS.

Steven J. Endersen 9-23-94

STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A320964, A320969-A320972

These samples were analyzed for Total Cyanide Distillation (SW846-9010A), Total Cyanide (SW846-9012), Total Organic Carbon (SW846-9060) and Total Solids (EPA 160.3).

For the Total Organic Carbon (TOC) analysis, one gram of sample was extracted with 100 ml of deionized water. The aqueous portion was then analyzed for TOC; therefore, the result reflects the water soluble part of the sample.

The Control Limits are 75-125% recovery and 20% RPD.

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
9/23/94

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HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317 486-5095

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A321112

For the Total Dissolved Solids analysis of this sample, less sample was filtered due to the sample matrix.

For the Total Alkalinity analysis, the sample was analyzed out of holding time because of analyst error.

See attached sheet for list of analyses performed on the sample and the methods utilized.

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
9/27/94

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7901 West Morris Street
Indianapolis, IN 46231
Phone: 317/243-0811
FAX: 317/486-5095

CYANIDE DISTILLATION	SW846-9010A
CYANIDE, TOTAL (AUTOMATED)	SW846-9012
SULFATE (TURBIDIMETRIC)	SW846-9038
CHLORIDE (COLORIMETRIC, AUTOMATED)	SW846-9251
NITROGEN, NITRATE (COLORIMETRIC AUTOMATED)	EPA 353.2
AMMONIA DISTILLATION	EPA 350.2
AMMONIA NITROGEN	EPA 350.3
ALKALINITY TOTAL	EPA 310.1
TOTAL SUSPENDED SOLIDS	EPA 160.2
DISSOLVED SOLIDS	EPA 160.1

CONTROL LIMITS (75-125% R, 20% RPD)

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HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SW-846 8240A, 8260A, AND 8270
SAMPLE A320964-972

The limits used for the volatile 8260A MS/MSD and LCS are advisory limits from the Heritage QAP. We are currently gathering data for laboratory generated control limits.

Samples A320971 and 972 failed to pass internal standard area requirements when initially analyzed for volatiles. They were reanalyzed with no improvement. Only the initial analysis is reported.

Sample A320970 was diluted 1:5 when analyzed for semi-volatiles. It could not be analyzed less dilute due to the high concentration of nontarget analytes.

There were no other QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

Recycled Paper

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SW-846 8260A AND 8270
SAMPLE A321112

Hexachlorocyclopentadiene failed in the MS/MSD for the semi-volatiles. It passed in the LCS so no corrective action is required.

The limits used for the volatile MS/MSD and LCS are advisory limits from the Heritage QAP. We are currently gathering data for laboratory generated control limits.

There were no QC problems encountered in the analysis of these samples.

Anne Bradburn
Anne Bradburn
GC/MS Group Leader

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HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46234
Phone: 317-243-8304
FAX: 317-243-0360

CASE NARRATIVE
GC GROUP

PCB Pesticide Analysis

SAMPLE # A320969 - A320972, A320964

These samples were analyzed using the normal procedures wit no modifications. The continuing calibration standards have some analytes outside the accepted limits. This is due to sample matrix interferences. These samples were analyzed numerous times with the same results.

Lisa A. Julian
GC Group Leader

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >7840C Inj Time : 940913 09:17 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A3

Mass Spec ID : GCMS#3 Last Calibration File Update : 940907 04:35

Calibration
Data Files: 20 uG/L ->7712C 50 uG/L ->7713C
100 uG/L ->7714C 150 uG/L ->7715C 200 uG/L->7716C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.05645	.02125	62.35			(Conc=300.00)
Acrylonitrile	.30552	.13759	54.96			(Conc=300.00)
Chloromethane	.86453	.72178	16.51		**	
Bromomethane	.87749	.93057	6.05			
Vinyl Chloride	.87104	.93863	7.76	*		
Dichlorodifluoromethane	1.05647	.87935	16.76			
Chloroethane	.63814	.62481	2.09			
Methylene Chloride	1.43640	1.42750	.62			
Acetone	.56057	.47879	14.59			
Carbon Disulfide	2.29926	2.10505	8.45			
Trichlorofluoromethane	2.71771	3.07231	13.05			
1,1-Dichloroethene	1.12220	1.10003	1.97	*		
1,1-Dichloroethane	2.06708	1.80749	12.56		**	
[Tetrahydrofuran]	.40040	.31143	22.22			(Conc=125.00)
1,2-Dichloroethene (total)	.98149	.92568	5.69			(Conc=100.00)
Diethyl Ether	.45406	.54544	20.12			
Chloroform	2.24550	2.37096	5.59	*		
Trichloro-trifluoroethane	1.38906	1.64675	18.55			
1,2-Dichloroethane-d4	1.29065	1.37259	6.35			
2-Butanone	.66052	.61671	6.63			
1,2-Dichloroethane	1.54700	1.77672	14.85			
Methyl-t-butyl ether	.76052	.73052	3.94			
1,1,1-Trichloroethane	.59354	.69781	17.57			
Carbon Tetrachloride	.65508	.81609	24.58			
Ethyl Acetate	.58764	.42489	27.70			
Vinyl Acetate	.29157	.21990	24.58			
Bromodichloromethane	.90815	.88383	2.68			
1,2-Dichloropropane	.45628	.41302	9.48	*		
cis-1,3-Dichloropropene	.70071	.68084	2.84			
Trichloroethene	.50926	.55010	8.02			
Diisopropyl Ether	1.18849	1.10237	7.25			
2-Chloroethyl Vinyl Ether	.15892	.16558	4.19			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >7840C Inj Time : 940913 09:17 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A3

Mass Spec ID : GCMS#3 Last Calibration File Update : 940907 04:35

Calibration
Data Files: 20 uG/L ->7712C 50 uG/L ->7713C
100 uG/L ->7714C 150 uG/L ->7715C 200 uG/L->7716C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.18637	1.09589	7.63			
1,1,2-Trichloroethane	.56782	.49204	13.35			
Benzene	.89511	.87329	2.44	*		
trans-1,3-Dichloropropene	.60630	.57848	4.59			
Bromoform	1.44021	1.25211	13.06		**	
4-Methyl-2-Pentanone	.80583	.58420	27.50			
2-Hexanone	.65989	.49338	25.23			
Tetrachloroethene	.55798	.64945	16.39			
1,1,2,2-Tetrachloroethane	1.22756	1.03591	15.61		**	
Toluene-d8	.95312	.95232	.08			
Toluene	.60534	.63524	4.94	*		
Chlorobenzene	1.08442	1.12715	3.94		**	
Ethylbenzene	.44437	.48383	8.88	*		
Bromofluorobenzene	1.29683	1.25495	3.23			
Styrene	1.13572	1.13701	.11			
m-Xylene	.60566	.64170	5.95			
o,p-Xylene	.59423	.61003	2.66			(Conc=100.00)
m-Dichlorobenzene	1.73465	1.87555	8.12			
o,p-Dichlorobenzene	1.62462	1.70777	5.12			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >7841C
ANALYSIS DATE/TIME: 9/13/94 10:29

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	20
Acrolein	BDL	uG/L	50
Acrylonitrile	BDL	uG/L	70
Benzene	BDL	uG/L	5
Bromodichloromethane	BDL	uG/L	5
Bromoform	BDL	uG/L	5
Bromomethane	BDL	uG/L	10
Carbon disulfide	BDL	uG/L	5
Carbon tetrachloride	BDL	uG/L	5
Chlorobenzene	BDL	uG/L	5
Chloroethane	BDL	uG/L	10
Chloroform	BDL	uG/L	5
Chloromethane	BDL	uG/L	10
Dibromochloromethane	BDL	uG/L	5
cis-1,3-Dichloropropene	BDL	uG/L	5
Dichlorodifluoromethane	BDL	uG/L	5
1,1-Dichloroethane	BDL	uG/L	5
1,2-Dichloroethane	BDL	uG/L	5
1,1-Dichloroethene	BDL	uG/L	5
1,2-Dichloropropane	BDL	uG/L	5
Ethylbenzene	BDL	uG/L	5
Fluorotrichloromethane	BDL	uG/L	5
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	5
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	5
1,1,2,2-Tetrachloroethane	BDL	uG/L	5
Tetrachloroethene	BDL	uG/L	5
Tetrahydrofuran	BDL	uG/L	25
Toluene	BDL	uG/L	5
1,2-Dichloroethene (total)	BDL	uG/L	5
trans-1,3-Dichloropropene	BDL	uG/L	5
1,1,1-Trichloroethane	BDL	uG/L	5
1,1,2-Trichloroethane	BDL	uG/L	5
Trichloroethene	BDL	uG/L	5
Vinyl acetate	BDL	uG/L	10
Vinyl chloride	BDL	uG/L	10
Xylenes (total)	BDL	uG/L	5

SURROGATE LIST			spike conc
Dichloroethane-d4	108	% Rec	50
Toluene-d8	111	% Rec	50
Bromofluorobenzene	94	% Rec	50

( ) = ESTIMATED CONCENTRATION

Semi-volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 15 Sep 94 3:25 pm
Data File: C:\F091594\8020F.D 5970 - MS Misc. #9/7
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Thu Sep 15 10:40:23 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 7931F.D cal50 = 7930F.D cal80 = 7932F.D
cal120 = 7933F.D cal160 = 7934F.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Chloronaphthalene	1.13060	1.16976	3.5
45		2-Nitroaniline	0.51893	0.57885	11.5
46		Dimethylphthalate	1.46575	1.33672	8.8
47		1,3-Dinitrobenzene	0.28772	0.27457	4.6
48		2,6-Dinitrotoluene	0.41732	0.40347	3.3
49		Acenaphthylene	1.96815	1.98162	0.7
50		3-Nitroaniline	0.40148	0.39974	0.4
51	MC	Acenaphthene	1.22827	1.28464	4.6
52	P	2,4-Dinitrophenol	0.23207	0.22590	2.7
53	MP	4-Nitrophenol	0.19022	0.14777	22.3
54		Dibenzofuran	1.49558	1.62216	8.5
55	M	2,4-Dinitrotoluene	0.54608	0.55148	1.0
56		2,3,4,6-Tetrachlorophenol	0.37111	0.38505	3.8
57		Diethylphthalate	1.52519	1.63763	7.4
58		Fluorene	1.16375	1.35281	16.2
59		4-Chlorophenyl-phenylether	0.60737	0.72452	19.3
60		4-Nitroaniline	0.46685	0.49120	5.2
61	I	Phenanthrene-d10	1.00000	1.00000	0.0
62		4,6-Dinitro-2-methylphenol	0.18007	0.18500	2.7
63	C	n-Nitrosodiphenylamine	0.49052	0.44972	8.3
64	S	2,4,6-Tribromophenol	0.14979	0.13999	6.5
65		Azobenzene	1.04472	1.01548	2.8
66		alpha-BHC	0.13721	0.13218	3.7
67		4-Bromophenyl-phenylether	0.20297	0.21139	4.2
68		Hexachlorobenzene	0.30102	0.26364	12.4
69		beta-BHC	0.11254	0.10809	4.0
70	MC	Pentachlorophenol	0.16556	0.12473	24.7
71		gamma-BHC	0.12204	0.11979	1.8
72		Phenanthrene	1.01969	1.01084	0.9
73		Anthracene	1.08024	1.08799	0.7
74		delta-BHC	0.11726	0.11124	5.1
75		Carbazole	0.82651	0.84974	2.8
76		Heptachlor	0.11140	0.11309	1.5
77		Di-n-butylphthalate	1.31593	1.34894	2.5
78		Aldrin	0.08454	0.07878	6.8
79		Heptachlor epoxide	0.05007	0.05384	7.5
80	C	Fluoranthene	1.12795	1.14237	1.3
81	I	Chrysene-d12	1.00000	1.00000	0.0
82		Benzidine	0.39967	0.15299	61.7
83	M	Pyrene	1.54880	1.40327	9.4
84		alpha-Endosulfan	0.04102	0.03818	6.9
85		p,p'-DDE	0.29264	0.25132	14.1
86	S	Terphenyl-d14	1.10285	0.98844	10.4

Semi-Volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 15 Sep 94 3:25 pm
Data File: C:\F091594\8020F.D 5970 - MS Misc. #9/7
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Thu Sep 15 10:40:23 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 7931F.D cal50 = 7930F.D cal80 = 7932F.D
cal120 = 7933F.D cal160 = 7934F.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
2		N-nitroso-dimethylamine	0.83057	0.91307	9.9
3		Pyridine	0.84662	0.96273	13.7
4		2-Picoline	0.95432	0.85468	10.4
5	S	2-Fluorophenol	1.02262	1.00357	1.9
6		Aniline	1.78912	1.83989	2.8
7	S	Phenol-d5	1.41429	1.36835	3.2
8	MC	Phenol	1.66535	1.59837	4.0
9		bis(2-Chloroethyl)ether	1.78705	1.35333	24.3
10	S	2-Chlorophenol-d4	1.22320	1.21333	0.8
11	MC	2-Chlorophenol	1.46182	1.34043	8.3
12		1,3-Dichlorobenzene	1.38606	1.33640	3.6
13	MC	1,4-Dichlorobenzene	1.48872	1.46194	1.8
14	S	1,2-Dichlorobenzene-d4	1.50708	1.50882	0.1
15		1,2-Dichlorobenzene	1.37331	1.38889	1.1
16		Benzyl alcohol	0.88369	0.83371	5.7
17		2-Methylphenol	1.12521	1.11047	1.3
18		bis(2-chloroisopropyl)ether	3.26184	3.63438	11.4
19	MP	n-Nitroso-di-n-propylamine	1.12622	1.22352	8.6
20		4-Methylphenol	1.28197	1.25419	2.2
21		Hexachloroethane	0.66181	0.65456	1.1
22	I	Naphthalene-d8	1.00000	1.00000	0.0
23	S	Nitrobenzene-d5	0.45164	0.44737	0.9
24		Nitrobenzene	0.50025	0.49826	0.4
25		Isophorone	0.90574	0.87469	3.4
26	C	2-Nitrophenol	0.24680	0.25132	1.8
27		2,4-Dimethylphenol	0.38790	0.37510	3.3
28		bis(2-Chloroethoxy)methane	0.52460	0.53072	1.2
29	C	2,4-Dichlorophenol	0.32364	0.30661	5.3
30		Benzoic acid	0.24606	0.14197	42.3
31	M	1,2,4-Trichlorobenzene	0.35477	0.34728	2.1
32		Naphthalene	1.10234	1.13024	2.5
33		4-Chloroaniline	0.42137	0.47959	13.8
34		Toluenediamine	0.31065	0.30982	0.3
35	C	Hexachlorobutadiene	0.22626	0.23972	5.9
36	MC	4-Chloro-3-methylphenol	0.36562	0.39162	7.1
37		2-Methylnaphthalene	0.65386	0.68718	5.1
38	I	Acenaphthene-d10	1.00000	1.00000	0.0
39	P	Hexachlorocyclopentadiene	0.25583	0.20497	19.9
40		1,2,4,5-Tetrachlorobenzene	0.51772	0.53548	3.4
41	C	2,4,6-Trichlorophenol	0.38467	0.41625	8.2
42		2,4,5-Trichlorophenol	0.46164	0.47621	3.2
43	S	2-Fluorobiphenyl	1.23328	1.22518	0.7

Heritage Laboratory, Indianapolis
Semi-volatile Continuing Calibration Report

Operator ID: GREG Date Acquired: 15 Sep 94 3:25 pm
Data File: C:\F091594\8020F.D 5970 - MS Misc. #9/7
Method: CALBNA.M Title: CLP BNA Calibration
Last Calibration Update: Thu Sep 15 10:40:23 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal20 = 7931F.D cal50 = 7930F.D cal80 = 7932F.D
cal120 = 7933F.D cal160 = 7934F.D

PK#		Compound	AvgRRF	CCRRF	%Dev
87		Dieldrin	0.27716	0.27996	1.0
88		Endrin	0.00955	0.01302	36.4
89		Endrin aldehyde	0.01621	0.00244	85.0
90		beta-Endosulfan	0.05747	0.05355	6.8
91		p,p'-DDD	0.54373	0.47738	12.2
92		Butylbenzylphthalate	0.77966	0.74003	5.1
93		Endosulfan sulfate	0.09506	0.08254	13.2
94		p,p'-DDT	0.29970	0.34044	13.6
95		Methoxychlor	0.39860	0.21090	47.1
96		Benzo[a]anthracene	1.22740	1.17335	4.4
97		3,3'-Dichlorobenzidine	0.33799	0.38893	15.1
98		Chrysene	1.26155	1.19285	5.4
99		bis(2-Ethylhexyl)phthalate	0.84171	0.96178	14.3
100	I	Perylene-d12	1.00000	1.00000	0.0
101	C	Di-n-octylphthalate	3.06110	2.61837	14.5
102		Benzo[b]fluoranthene	2.17025	1.89273	12.8
103		Benzo[k]fluoranthene	2.32611	2.00595	13.8
104	C	Benzo[a]pyrene	1.80572	1.70450	5.6
105		Indeno[1,2,3-cd]pyrene	1.09580	1.28578	17.3
106		Dibenz[a,h]anthracene	0.82612	1.01648	23.0
107		Benzo[g,h,i]perylene	0.85249	0.99639	16.9

(#) = Out of Range (Advisory for non-CCC)

SEMI-VOLATILES ANALYSIS-INSTRUMENT BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >8021F

ANALYSIS DATE/TIME: 9/15/94 16:19

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	mG/L	10
Acenapthylene	BDL	mG/L	10
Anthracene	BDL	mG/L	10
Benz(a)anthracene	BDL	mG/L	10
Benzo(a)pyrene	BDL	mG/L	10
Benzo(b)fluoranthene	BDL	mG/L	10
Benzo(ghi)perylene	BDL	mG/L	10
Benzo(k)fluoranthene	BDL	mG/L	10
Benzyl Alcohol	BDL	mG/L	10
Benzylbutylphthalate	BDL	mG/L	10
Bis(2-chloroethoxy)methane	BDL	mG/L	10
Bis(2-chloroethyl)ether	BDL	mG/L	10
Bis(2-chloroisopropyl)ether	BDL	mG/L	10
Bis(2-ethylhexyl)phthalate	BDL	mG/L	10
4-Bromophenylphenylether	BDL	mG/L	10
Carbazole	BDL	mG/L	10
4-Chloroaniline	BDL	mG/L	10
2-Chloronaphthalene	BDL	mG/L	10
4-Chlorophenylphenylether	BDL	mG/L	10
Chrysene	BDL	mG/L	10
Dibenz(a,h)anthracene	BDL	mG/L	10
Dibenzofuran	BDL	mG/L	10
1,2-Dichlorobenzene	BDL	mG/L	10
1,3-Dichlorobenzene	BDL	mG/L	10
1,4-Dichlorobenzene	BDL	mG/L	10
3,3' -Dichlorobenzidine	BDL	mG/L	20
Diethylphthalate	BDL	mG/L	10
Dimethylphthalate	BDL	mG/L	10
Di-n-butylphthalate	BDL	mG/L	10
Dinitrobenzenes	BDL	mG/L	50
2,4-Dinitrotoluene	BDL	mG/L	10
2,6-Dinitrotoluene	BDL	mG/L	10
Di-n-octylphthalate	BDL	mG/L	10
Fluoranthene	BDL	mG/L	10
Fluorene	BDL	mG/L	10
Hexachlorobenzene	BDL	mG/L	10
Hexachlorobutadiene	BDL	mG/L	10
Hexachlorocyclopentadiene	BDL	mG/L	10
Hexachloroethane	BDL	mG/L	10
Indeno(1,2,3-cd)pyrene	BDL	mG/L	10
Isophorone	BDL	mG/L	10
2-Methylnaphthalene	BDL	mG/L	10
Naphthalene	BDL	mG/L	10

MASS SPEC FILE: >8021F

2-Nitroaniline.....	BDL	mG/L	50
3-Nitroaniline.....	BDL	mG/L	50
4-Nitroaniline.....	BDL	mG/L	50
Nitrobenzene.....	BDL	mG/L	10
N-Nitroso-diphenylamine.....	BDL	mG/L	10
N-Nitroso-di-n-propylamine.....	BDL	mG/L	10
Phenanthrene.....	BDL	mG/L	10
2-Picoline.....	BDL	mG/L	50
Pyrene.....	BDL	mG/L	10
Pyridine.....	BDL	mG/L	50
Tetrachlorobenzenes.....	BDL	mG/L	10
Toluenediamine.....	BDL	mG/L	50
1,2,4-Trichlorobenzene.....	BDL	mG/L	10
Benzoic Acid.....	BDL	mG/L	50
4-Chloro-3-methylphenol.....	BDL	mG/L	10
2-Chlorophenol.....	BDL	mG/L	10
2,4-Dichlorophenol.....	BDL	mG/L	10
2,4-Dimethylphenol.....	BDL	mG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	mG/L	50
2,4-Dinitrophenol.....	BDL	mG/L	50
2-Methylphenol.....	BDL	mG/L	10
4-Methylphenol.....	BDL	mG/L	10
2-Nitrophenol.....	BDL	mG/L	10
4-Nitrophenol.....	BDL	mG/L	50
Pentachlorophenol.....	BDL	mG/L	50
Phenol.....	BDL	mG/L	10
Tetrachlorophenol.....	BDL	mG/L	10
2,4,5-Trichlorophenol.....	BDL	mG/L	50
2,4,6-Trichlorophenol.....	BDL	mG/L	10

( ) = ESTIMATED CONCENTRATION

SEMI-VOLATILES ANALYSIS-SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >8001F SVL# 832-151

ANALYSIS DATE/TIME: 9/14/94 11:14

PREP DATE: 9/9/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/KG	330
Acenapthylene	BDL	uG/KG	330
Anthracene	BDL	uG/KG	330
Benz(a)anthracene	BDL	uG/KG	330
Benzo(a)pyrene	BDL	uG/KG	330
Benzo(b)fluoranthene	BDL	uG/KG	330
Benzo(ghi)perylene	BDL	uG/KG	330
Benzo(k)fluoranthene	BDL	uG/KG	330
Benzyl Alcohol	BDL	uG/KG	330
Benzylbutylphthalate	BDL	uG/KG	330
Bis(2-chloroethoxy)methane	BDL	uG/KG	330
Bis(2-chloroethyl)ether	BDL	uG/KG	330
Bis(2-chloroisopropyl)ether	BDL	uG/KG	330
Bis(2-ethylhexyl)phthalate	BDL	uG/KG	330
4-Bromophenylphenylether	BDL	uG/KG	330
Carbazole	BDL	uG/KG	330
4-Chloroaniline	BDL	uG/KG	330
2-Chloronaphthalene	BDL	uG/KG	330
4-Chlorophenylphenylether	BDL	uG/KG	330
Chrysene	BDL	uG/KG	330
Dibenz(a,h)anthracene	BDL	uG/KG	330
Dibenzofuran	BDL	uG/KG	330
1,2-Dichlorobenzene	BDL	uG/KG	330
1,3-Dichlorobenzene	BDL	uG/KG	330
1,4-Dichlorobenzene	BDL	uG/KG	330
3,3' -Dichlorobenzidine	BDL	uG/KG	660
Diethylphthalate	BDL	uG/KG	330
Dimethylphthalate	BDL	uG/KG	330
Di-n-butylphthalate	BDL	uG/KG	330
Dinitrobenzenes	BDL	uG/KG	1600
2,4-Dinitrotoluene	BDL	uG/KG	330
2,6-Dinitrotoluene	BDL	uG/KG	330
Di-n-octylphthalate	BDL	uG/KG	330
Fluoranthene	BDL	uG/KG	330
Fluorene	BDL	uG/KG	330
Hexachlorobenzene	BDL	uG/KG	330
Hexachlorobutadiene	BDL	uG/KG	330
Hexachlorocyclopentadiene	BDL	uG/KG	330
Hexachloroethane	BDL	uG/KG	330
Indeno(1,2,3-cd)pyrene	BDL	uG/KG	330
Isophorone	BDL	uG/KG	330
2-Methylnaphthalene	BDL	uG/KG	330
Naphthalene	BDL	uG/KG	330

MASS SPEC FILE: >8001F

2-Nitroaniline.....	BDL	uG/KG	1600
3-Nitroaniline.....	BDL	uG/KG	1600
4-Nitroaniline.....	BDL	uG/KG	1600
Nitrobenzene.....	BDL	uG/KG	330
N-Nitroso-diphenylamine.....	BDL	uG/KG	330
N-Nitroso-di-n-propylamine.....	BDL	uG/KG	330
Phenanthrene.....	BDL	uG/KG	330
2-Picoline.....	BDL	uG/KG	1600
Pyrene.....	BDL	uG/KG	330
Pyridine.....	BDL	uG/KG	1600
Tetrachlorobenzenes.....	BDL	uG/KG	330
Toluenediamine.....	BDL	uG/KG	1600
1,2,4-Trichlorobenzene.....	BDL	uG/KG	330
Benzoic Acid.....	BDL	uG/KG	1600
4-Chloro-3-methylphenol.....	BDL	uG/KG	330
2-Chlorophenol.....	BDL	uG/KG	330
2,4-Dichlorophenol.....	BDL	uG/KG	330
2,4-Dimethylphenol.....	BDL	uG/KG	330
4,6-Dinitro-2-methylphenol.....	BDL	uG/KG	1600
2,4-Dinitrophenol.....	BDL	uG/KG	1600
2-Methylphenol.....	BDL	uG/KG	330
4-Methylphenol.....	BDL	uG/KG	330
2-Nitrophenol.....	BDL	uG/KG	330
4-Nitrophenol.....	BDL	uG/KG	1600
Pentachlorophenol.....	BDL	uG/KG	1600
Phenol.....	BDL	uG/KG	330
Tetrachlorophenol.....	BDL	uG/KG	330
2,4,5-Trichlorophenol.....	BDL	uG/KG	1600
2,4,6-Trichlorophenol.....	BDL	uG/KG	330

SURROGATE LIST			spike conc
2-Fluorophenol.....	85	% Rec	3300
Phenol-d5.....	80	% Rec	3300
Nitrobenzene-d5.....	84	% Rec	1600
2-Fluorobiphenyl.....	82	% Rec	1600
2,4,6-Tribromophenol.....	52	% Rec	3300
Terphenyl-d14.....	78	% Rec	1600

ALSO DETECTED	CONC.	R.T.
Unknown.....	(460)	4.21
4,4-dimethyl-2-pentene.....	(1500)	5.72
Unknown.....	(1700)	6.48
Unknown.....	(62000)	7.23
Unknown.....	(510)	8.88
Unknown.....	(240)	24.50

( ) = ESTIMATED CONCENTRATION

Semi-Volatile Continuing Calibration Check

File ID : >0916B Inj Time : 940914 12:23 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940913 17:31

Calibration
Data Files: 20 uG/mL->0889B 50 uG/mL->0888B 80 uG/mL->0890B
120 uG/mL->0891B 160 uG/mL->0892B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	1.25183	1.40363	12.13			(Conc=50.00)
Pyridine	1.64999	1.60694	2.61			
2-Picoline	1.46028	1.49521	2.39			
2-Fluorophenol	1.43734	1.39739	2.78			
Aniline	2.40506	2.51884	4.73			
Phenol-d6	2.10730	1.98472	5.82			
Phenol	2.46638	2.35873	4.36	*		
bis(2-chloroethyl)ether	2.09568	2.02792	3.23			
2-Chlorophenol-d4	1.50695	1.47644	2.02			
2-Chlorophenol	1.64416	1.64082	.20			
1,3-Dichlorobenzene	1.56387	1.51451	3.16			
1,4-Dichlorobenzene	1.63575	1.60300	2.00	*		
Benzyl alcohol	1.20305	1.18037	1.89			
1,2-Dichlorobenzene	1.62982	1.58288	2.88			
1,2-Dichlorobenzene-d4	1.67332	1.60883	3.85			
2-Methylphenol	1.57457	1.56136	.84			
bis(2-chloroisopropyl)ether	2.21165	2.15600	2.52			
4-Methylphenol	1.73989	1.74742	.43			
N-Nitroso-di-n-propylamine	1.53346	1.50650	1.76		**	
Hexachloroethane	.78533	.76970	1.99			
Nitrobenzene-d5	.48620	.47683	1.93			
Nitrobenzene	.65076	.52151	19.86			
Isophorone	.99646	.98336	1.32			
2-Nitrophenol	.22326	.22139	.84	*		
2,4-Dimethylphenol	.39103	.38068	2.65			
Benzoic acid	.24723	.17155	30.61			
bis(2-Chloroethoxy)methane	.64129	.67651	5.49			
2,4-Dichlorophenol	.30309	.30035	.91	*		
1,2,4-Trichlorobenzene	.29890	.28346	5.17			
Naphthalene	1.16329	1.11769	3.92			
4-Chloroaniline	.43217	.46447	7.47			
Hexachlorobutadiene	.14222	.13577	4.53	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0916B Inj Time : 940914 12:23 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940913 17:31

Calibration

120 uG/mL->0891B 160 uG/mL->0892B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.35889	.35177	1.98	*	
2-Methylnaphthalene	.75641	.68727	9.14		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.54972	.52878	3.81		
Hexachlorocyclopentadiene	.32514	.27241	16.22		**
2,4,6-Trichlorophenol	.36076	.36736	1.83	*	
2,4,5-Trichlorophenol	.38499	.39733	3.21		
2-Chloronaphthalene	1.29561	1.27648	1.48		
2-Fluorobiphenyl	1.35674	1.31782	2.87		
2-Nitroaniline	.53266	.57644	8.22		
1,3-Dinitrobenzene	.24024	.25768	7.26		
Dimethylphthalate	1.41498	1.52104	7.50		
Acenaphthylene	2.16020	2.13348	1.24		
2,6-Dinitrotoluene	.33032	.32675	1.08		
3-Nitroaniline	.37894	.43147	13.86		
Acenaphthene	1.32322	1.33017	.53	*	
2,4-Dinitrophenol	.11938	.15724	31.71		**
4-Nitrophenol	.13243	.18727	41.41		**
Dibenzofuran	1.74522	1.75233	.41		
2,4-Dinitrotoluene	.37375	.43678	16.87		
2,3,4,6-Tetrachlorophenol	.19988	.22857	14.35		
Diethylphthalate	1.35209	1.57463	16.46		
4-Chlorophenyl-phenylether	.58018	.58751	1.26		
Fluorene	1.30515	1.40186	7.41		
4-Nitroaniline	.30740	.40727	32.49		
2,4,6-Tribromophenol	.10788	.13195	22.31		
4,6-Dinitro-2-methylphenol	.11307	.11291	.14		
N-Nitrosodiphenylamine (1)	.53205	.54460	2.36	*	
4-Bromophenyl-phenylether	.21924	.19359	11.70		
Hexachlorobenzene	.24976	.20170	19.24		
Pentachlorophenol	.10532	.10909	3.57	*	
Phenanthrene	1.16050	1.13112	2.53		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0916B Inj Time : 940914 12:23 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940913 17:31

Calibration
Data Files: 20 uG/mL->0889B 50 uG/mL->0888B 80 uG/mL->0890B
120 uG/mL->0891B 160 uG/mL->0892B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC

Anthracene	1.07620	1.10627	2.79
Carbazole	1.81389	2.12194	16.98
Di-n-butylphthalate	1.33946	1.65494	23.55

alpha-BHC	.14707	.12758	13.25		
beta-BHC	.09285	.09213	.78		
gamma-BHC (Lindane)	.10790	.10396	3.65		
1,2-Diphenylhydrazine	1.65220	1.37048	17.05		
delta-BHC	.09083	.09415	3.66		
Heptachlor	.09438	.09079	3.81		
Aldrin	.06286	.06614	5.21		
Heptachlor epoxide	.05096	.06544	28.44		
Benzidine	.32547	.38134	17.17		(Conc=50.00)
Pyrene	2.01208	1.93537	3.81		
Terphenyl-d14	1.23193	1.22897	.24		
Butylbenzylphthalate	.97800	1.00382	2.64		
3,3'-Dichlorobenzidine	.31972	.34110	6.69		
Benzo(a)anthracene	1.57634	1.27912	18.86		
Chrysene	1.10532	1.12859	2.11		
bis(2-Ethylhexyl)phthalate	1.30436	1.28065	1.82		
alpha-Endosulfan	.04322	.04216	2.46		
Dieldrin	.55889	.53675	3.96		
p,p'-DDE	.34097	.33567	1.55		
Endrin	.07634	.07311	4.24		
beta-Endosulfan	.04174	.04811	15.28		
p,p'-DDD	.53516	.53421	.18		
Endrin aldehyde	-	-	-		
Endosulfan sulfate	.08143	.07801	4.21		
p,p'-DDT	.43587	.43435	.35		
Di-n-octylphthalate	4.17133	4.59131	10.07	*	
Benzo(b)fluoranthene	2.21403	2.25452	1.83		
Benzo(k)fluoranthene	1.57805	1.72961	9.60		

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 09/14/94

Contractor: Time: 12:23

Contract No: Laboratory ID: >0916B

Instrument ID: GCMS#2 Initial Calibration Date: 09/13/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.70215	1.78802	5.05	*	
Indeno(1,2,3-cd)pyrene	1.07386	1.10468	2.87		
Dibenz(a,h)anthracene	.90878	1.09889	20.92		
Benzo(g,h,i)perylene	.97413	1.05348	8.15		

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RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 13 Sep 94 6:18 am
Data File: C:\I091394\7870J.D GCMS#9 Misc. CALIBRATION CHECK 9/13/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Sep 02 09:18:50 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Hexanone	0.11569	0.06687	42.2
45		1,3-Dichloropropane	0.44805	0.30224	32.5
46		Tetrachloroethene	0.76995	0.94213	22.4
47		Dibromochloromethane	0.47966	0.38528	19.7
48	P	Chlorobenzene	1.15921	1.11993	3.4
49		1,1,1,2-Tetrachloroethane	0.52593	0.41578	20.9
50	C	Ethyl Benzene	0.63051	0.67075	6.4
51		m,p--Xylene	0.79619	0.76174	4.3
52		o-Xylene	0.71928	0.72801	1.2
53		Styrene	1.15837	1.07244	7.4
54	P	Bromoform	0.23071	0.21615	6.3
55	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56		Isopropylbenzene	3.48645	4.51028	29.4
57		trans-1,4-Dichloro-2-butene	0.02892	0.02444	15.5
58	P	1,1,2,2-Tetrachloroethane	0.44868	0.39831	11.2
59		Bromobenzene	1.58568	1.48047	6.6
60		1,2,3-Trichloropropane	0.29220	0.23405	19.9
61		n-Propylbenzene	0.48860	0.57671	18.0
62		1,3,5-Trimethylbenzene	2.61938	3.40870	30.1
63		2-Chlorotoluene	0.73236	0.89012	21.5
64		4-Chlorotoluene	0.73839	0.88636	20.0
65		t-Butylbenzene	2.58756	3.52717	36.3
66		1,2,4-Trimethylbenzene	2.56215	3.25034	26.9
67		sec-Butylbenzene	4.22555	5.73179	35.6
68		p-Isopropyltoluene	2.87246	4.01363	39.7
69		1,3-Dichlorobenzene	1.56747	1.69782	8.3
70		1,4-Dichlorobenzene	1.51852	1.59947	5.3
71		n-Butylbenzene	2.03280	2.51563	23.8
72		1,2-Dichlorobenzene	1.18051	1.19925	1.6
73		1,2-Dibromo-3-chloropropane	0.09531	0.07394	22.4
74		1,2,4-Trichlorobenzene	0.87256	0.98743	13.2
75		Naphthalene	0.80810	0.70138	13.2
76		Hexachlorobutadiene	0.91731	1.18004	28.6
77		1,2,3-Trichlorobenzene	0.66289	0.70318	6.1

(#) = Out of Range (Advisory for non-CCC)

Volatile Analysis - Water Method Blank
Analysis Method: SW846-8260

Mass Spec File: >7871J
Analysis date/time: 9/13/94 07:25

Analyte List	Result	DL	Units
Benzene	BDL	1	uG/L
Bromobenzene	BDL	1	uG/L
Bromochloromethane	BDL	1	uG/L
Bromodichloromethane	BDL	1	uG/L
Bromoform	BDL	1	uG/L
Bromomethane	BDL	1	uG/L
n-Butylbenzene	BDL	1	uG/L
tert-Butylbenzene	BDL	1	uG/L
Carbon tetrachloride	BDL	1	uG/L
Chlorobenzene	BDL	1	uG/L
Chloroethane	BDL	1	uG/L
Chloroform	BDL	1	uG/L
Chloromethane	BDL	1	uG/L
2-Chlorotoluene	BDL	1	uG/L
4-Chlorotoluene	BDL	1	uG/L
Dibromochloromethane	BDL	1	uG/L
1,2-Dibromo-3-Chloropropane	BDL	1	uG/L
1,2-Dibromoethane	BDL	1	uG/L
Dibromomethane	BDL	1	uG/L
1,2-Dichlorobenzene	BDL	1	uG/L
1,3-Dichlorobenzene	BDL	1	uG/L
1,4-Dichlorobenzene	BDL	1	uG/L
1,1-Dichloroethane	BDL	1	uG/L
1,2-Dichloroethane	BDL	1	uG/L
1,1-Dichloroethene	BDL	1	uG/L
cis-1,2-Dichloroethene	BDL	1	uG/L
trans-1,2-Dichloroethene	BDL	1	uG/L
1,2-Dichloropropane	BDL	1	uG/L
1,3-Dichloropropane	BDL	1	uG/L
2,2-Dichloropropane	BDL	1	uG/L
1,1-Dichloropropene	BDL	1	uG/L
cis-1,3-Dichloropropene	BDL	1	uG/L
trans-1,3-Dichloropropene	BDL	1	uG/L
Ethyl Benzene	BDL	1	uG/L
Hexachlorobutadiene	BDL	1	uG/L
Isopropylbenzene	BDL	1	uG/L
Dichloromethane	BDL	1	uG/L
Naphthalene	BDL	1	uG/L
N-Propylbenzene	BDL	1	uG/L
Styrene	BDL	1	uG/L
1,1,1,2-Tetrachloroethane	BDL	1	uG/L
1,1,2,2-Tetrachloroethane	BDL	1	uG/L
Tetrachloroethane	BDL	1	uG/L
Toluene	BDL	1	uG/L
1,2,3-Trichloropropane	BDL	1	uG/L
1,2,4-Trichlorobenzene	BDL	1	uG/L

Mass Spec File: >7871J

Analyte List	Result	DL	Units
1,1,1-Trichloroethane.....	BDL	1	uG/L
1,1,2-Trichloroethane.....	BDL	1	uG/L
Trichloroethene.....	BDL	1	uG/L
Trichlorofluoromethane.....	BDL	1	uG/L
1,2,3-Trichloropropane.....	BDL	1	uG/L
1,2,4-Trimethylbenzene.....	BDL	1	uG/L
1,3,5-Trimethylbenzene.....	BDL	1	uG/L
Vinyl Chloride.....	BDL	1	uG/L
Xylenes (o/m/p-xylene).....	BDL	1	uG/L
Acetone.....	BDL	10	uG/L
2-Hexanone.....	BDL	10	uG/L
Methylethyl ketone.....	BDL	10	uG/L
4-Methyl-2-pentanone.....	BDL	10	uG/L

Surrogate Recovery		
Dichloroethane-d4.....	98	% Recovery
Toluene-d8.....	99	% Recovery
4-Bromofluorobenzene.....	100	% Recovery

Semi-Volatile Continuing Calibration Check

File ID : >0858B Inj Time : 940909 09:40 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration
Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	1.09890	1.08371	1.38			(Conc=50.00)
Pyridine	1.55128	1.26958	18.16			
2-Picoline	1.39469	1.30686	6.30			
2-Fluorophenol	1.40762	1.25921	10.54			
Aniline	2.24127	2.22794	.59			
Phenol-d6	1.89705	2.09448	10.41			
Phenol	2.27531	2.41763	6.25	*		
bis(2-chloroethyl)ether	1.98367	2.01720	1.69			
2-Chlorophenol-d4	1.48901	1.55479	4.42			
2-Chlorophenol	1.61605	1.70484	5.49			
1,3-Dichlorobenzene	1.52211	1.66423	9.34			
1,4-Dichlorobenzene	1.60362	1.75025	9.14	*		
Benzyl alcohol	1.08784	1.22875	12.95			
1,2-Dichlorobenzene	1.57840	1.59538	1.08			
1,2-Dichlorobenzene-d4	1.66601	1.71389	2.87			
2-Methylphenol	1.46847	1.56457	6.54			
bis(2-chloroisopropyl)ether	1.76172	1.76936	.43			
4-Methylphenol	1.61390	1.72341	6.79			
N-Nitroso-di-n-propylamine	1.32972	1.39197	4.68		**	
Hexachloroethane	.72294	.71598	.96			
Nitrobenzene-d5	.45490	.43966	3.35			
Nitrobenzene	.45174	.58600	29.72			
Isophorone	.92855	.91238	1.74			
2-Nitrophenol	.22280	.22082	.89	*		
2,4-Dimethylphenol	.36264	.34290	5.44			
Benzoic acid	.23741	.24889	4.84			
bis(2-Chloroethoxy)methane	.62503	.59630	4.60			
2,4-Dichlorophenol	.30965	.30150	2.63	*		
1,2,4-Trichlorobenzene	.31623	.29282	7.40			
Naphthalene	1.16936	1.19866	2.51			
4-Chloroaniline	.45037	.41634	7.56			
Hexachlorobutadiene	.16091	.15386	4.38	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0858B Inj Time : 940909 09:40 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration

Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.32645	.30344	7.05	*	
2-Methylnaphthalene	.96402	.90864	5.74		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.59660	.61620	3.28		
Hexachlorocyclopentadiene	.33703	.20647	38.74		**
2,4,6-Trichlorophenol	.43781	.41480	5.25	*	
2,4,5-Trichlorophenol	.42518	.38828	8.68		
2-Chloronaphthalene	1.33818	1.41783	5.95		
2-Fluorobiphenyl	1.42488	1.50982	5.96		
2-Nitroaniline	.48837	.47482	2.77		
1,3-Dinitrobenzene	.26882	.23945	10.92		
Dimethylphthalate	1.39798	1.39876	.06		
Acenaphthylene	2.28008	2.30377	1.04		
2,6-Dinitrotoluene	.31460	.35328	12.29		
3-Nitroaniline	.39796	.38608	2.98		
Acenaphthene	1.38365	1.40903	1.83	*	
2,4-Dinitrophenol	.19375	.16613	14.26		**
4-Nitrophenol	.13463	.06011	55.35		**
Dibenzofuran	1.81135	1.77545	1.98		
2,4-Dinitrotoluene	.42796	.40907	4.41		
2,3,4,6-Tetrachlorophenol	.25265	.21949	13.12		
Diethylphthalate	1.46013	1.41170	3.32		
4-Chlorophenyl-phenylether	.64338	.58731	8.71		
Fluorene	1.45180	1.35809	6.46		
4-Nitroaniline	.35875	.28813	19.68		
2,4,6-Tribromophenol	.15715	.11799	24.92		
4,6-Dinitro-2-methylphenol	.13741	.13193	3.99		
N-Nitrosodiphenylamine (1)	.50905	.59525	16.93	*	
4-Bromophenyl-phenylether	.23001	.22759	1.05		
Hexachlorobenzene	.27702	.24130	12.89		
Pentachlorophenol	.13182	.10593	19.64	*	
Phenanthrene	1.30775	1.12267	14.15		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0858B Inj Time : 940909 09:40 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940903 12:08

Calibration
Data Files: 20 uG/mL->0795B 50 uG/mL->0794B 80 uG/mL->0796B
120 uG/mL->0797B 160 uG/mL->0798B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC

Anthracene	1.14815	1.16623	1.57
Carbazole	1.91461	1.83498	4.16
Di-n-butylphthalate	1.34047	1.23274	8.04

alpha-BHC	.13330	.15487	16.18		
beta-BHC	.08994	.08537	5.08		
gamma-BHC (Lindane)	.10791	.10888	.90		
1,2-Diphenylhydrazine	1.35135	1.44595	7.00		
delta-BHC	.08914	.08261	7.33		
Heptachlor	.10929	.09618	11.99		
Aldrin	.07512	.06504	13.42		
Heptachlor epoxide	.04783	.05166	8.01		
Benzidine	.34981	.18555	46.96		(Conc=50.00)
Pyrene	2.40684	2.36155	1.88		
Terphenyl-d14	1.36351	1.31869	3.29		
Butylbenzylphthalate	.82507	.89597	8.59		
3,3'-Dichlorobenzidine	.36142	.35749	1.09		
Benzo(a)anthracene	1.57311	1.31704	16.28		
Chrysene	1.03205	1.10023	6.61		
bis(2-Ethylhexyl)phthalate	1.08766	1.14201	5.00		
alpha-Endosulfan	.05288	.04405	16.69		
Dieldrin	.53411	.58573	9.67		
p,p'-DDE	.39464	.39577	.29		
Endrin	.08716	.08829	1.30		
beta-Endosulfan	.04584	.04337	5.38		
p,p'-DDD	.53489	.52637	1.59		
Endrin aldehyde	-	-	-		
Endosulfan sulfate	.08544	.07950	6.95		
p,p'-DDT	.44380	.43563	1.84		
Di-n-octylphthalate	2.50408	2.77468	10.81	*	
Benzo(b)fluoranthene	1.75296	1.43162	18.33		
Benzo(k)fluoranthene	1.17111	1.42035	21.28		

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 09/09/94

Contractor: Time: 09:40

Contract No: Laboratory ID: >0858B

Instrument ID: GCMS#2 Initial Calibration Date: 09/03/94

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34485	1.43868	6.98	*	
Indeno(1,2,3-cd)pyrene	.92078	.83584	9.23		
Dibenz(a,h)anthracene	.86391	.86179	.25		
Benzo(g,h,i)perylene	.94809	.92284	2.66		

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RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >0848B SVL# 830-149

ANALYSIS DATE/TIME: 9/7/94 20:56

PREP DATE: 9/7/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzyl Alcohol	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
Dinitrobenzenes	BDL	uG/L	50
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
2-Picoline.....	BDL	uG/L	50
Pyrene.....	BDL	uG/L	10
Pyridine.....	BDL	uG/L	50
Tetrachlorobenzenes.....	BDL	uG/L	10
Toluenediamine.....	BDL	uG/L	50
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
Benzoic Acid.....	BDL	uG/L	50
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	74	% Rec	100
Phenol-d5.....	56	% Rec	100
Nitrobenzene-d5.....	107	% Rec	50
2-Fluorobiphenyl.....	106	% Rec	50
2,4,6-Tribromophenol.....	118	% Rec	100
Terphenyl-d14.....	116	% Rec	50

( ) = ESTIMATED CONCENTRATION

HERITAGE

VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >7811C

ANALYSIS DATE/TIME: 9/12/94 05:12

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST		
Dichloroethane-d4	87	% Rec
Toluene-d8	96	% Rec
Bromofluorobenzene	108	% Rec

( ) = ESTIMATED CONCENTRATION

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

QUALITY ASSURANCE REPORT PACKAGE #1769
CONESTOGA-ROVER & ASSOCIATES, INC.

DEBBIE GAGE
CONESTOGA-ROVER & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD SUITE 103
ROSEMONT, IL 60018
(708) 299-9933

HERITAGE # A314355-368

PREPARED BY: HERITAGE ENVIRONMENTAL SERVICES, INC
LABORATORY DIVISION
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
(317) 243-8304

APPROVED BY: _____
PROJECT CHEMIST

CRA

CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road - Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	HCN	NH3	Total Metals	Diss. Metals	SO4/NO3/Cl/TOC/TS					REMARKS
	6/14/94	1815	GW-061494-WP-086	water	7	-	-	-	-	-	-					A314355
			TOTAL NUMBER OF CONTAINERS		7											

RELINQUISHED BY:	DATE: / TIME:	RECEIVED BY:	DATE: / TIME:
① [signature]	DATE: 6/15/94 TIME: 1100	②	
②		③	
③		④	

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 9224965956

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SAMPLE TEAM: K. Johnson, W. Pochron

RECEIVED FOR LABORATORY BY: S. Askew
DATE: 6/16/94 TIME:

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Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	SVOC	PCB/PEST	Total metals	HCN							REMARKS
	6/6/94	0945	SW-061594-WP-093	Water	6	✓	✓	✓	✓							A314358

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1620	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

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SAMPLE TEAM: K. Johnson, W. Pochron

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DATE: 6/16/94 TIME:

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Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pochron

PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: VOC	Metals	Cyanide	REMARKS
1	6/15/94	1305	SW061594-WP-099	Water	6	✓	✓	✓	A314 359

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① Walter J. Pochron	DATE: 6/15/94 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

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SAMPLE TEAM: W. Pochron, K. Johnson

RECEIVED FOR LABORATORY BY: [illegible]

DATE 6/16/94 TIME:

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Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5368

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pachan

PRINTED NAME: Walter J. Pachan

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: VOC	PARAMETERS: Metals	PARAMETERS: Cyanide	REMARKS
1	6/15/94	1315	SW-061594-WP-095	Water	6	✓	✓	✓	MSH 360
			TOTAL NUMBER OF CONTAINERS		6				

RELINQUISHED BY: ① Walter J. Pachan	DATE: 6/15/94 TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

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SAMPLE TEAM: W. Pachan, K. Johnson

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CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	SVOC	PCB/Pest	Metals	Cyanide						REMARKS
1	6/15/94	1320	SW-061594-WR-096	Water	6	✓	✓	✓	✓						A314361

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
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SAMPLE TEAM: W. Pochron, K. Johnson

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CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5368

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: W. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	PCB/Pest	Metals	Cyanide							REMARKS
1	6/15/94	1515	SW-061594-WP-097	Water	6	✓	✓	✓	✓							A314362

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

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SAMPLE TEAM: W. Pochron, K. Johnson

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DATE: [illegible] TIME:

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CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC									REMARKS
1	6/14/94	1815	GW-061494-WP-086	Water	2	✓										A374355
2	6/15/94	0945	SW-061594-WP-090	Water	2	✓										358
3	6/15/94	0910	SW-061594-WP-091	Water	2	✓										356
4	6/15/94	0925	SW-061594-WP-092	Water	2	✓										357
5	6/15/94	1305	SW-061594-WP-094	Water	2	✓										359
6	6/15/94	1315	SW-061594-WP-095	Water	2	✓										360
7	6/15/94	1320	SW-061594-WP-096	Water	2	✓										361
8	6/15/94	1515	SW-061594-WP-099	Water	2	✓										362
9	6/15/94	0815	GW-061594-WP-088	Water	3	✓	✓									363
10	6/15/94		GW-061594-WP-103	Water	1	✓										Trip blank 364

TOTAL NUMBER OF CONTAINERS 19

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
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SAMPLE TEAM: K. Johnson, W. Rochron

RECEIVED FOR LABORATORY BY: [signature]
DATE: 6/16/94 TIME:

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CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	PCB/PEST	Tot. Metals	HCN							REMARKS
	6/15/94	0925	SW-061594-WP-002	water	6	✓	✓	✓	✓							1314357

TOTAL NUMBER OF CONTAINERS 6

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1215	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

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SAMPLE TEAM: K. Johnson, W. Pochron

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CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: [signature]

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: SVOC	VOC	Tot. Metals	PCB/PEST							REMARKS
	6/15/94	0910	SW-061594-WP-091	water	6											A314356
			TOTAL NUMBER OF CONTAINERS		6											

RELINQUISHED BY: ① [signature]	DATE: 6/15/94 TIME: 1615	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 9224965956

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SAMPLE TEAM: K. Johnson, W. Pochron

RECEIVED FOR LABORATORY BY:

DATE: TIME:

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Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage Laboratories

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE: Walter J. Pochron PRINTED NAME: Walter J. Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC	PCB/Pest	Metals	Cyanide					REMARKS
1	6/15/94	1330	D-061594-WP-097	Soil	2	✓	✓	✓	✓	✓	✓				A314365
2	6/15/94	1335	D-061594-WP-098	Soil	2	✓	✓	✓	✓	✓					366
3	6/15/94	1445	D-061594-WP-100	Soil	2	✓	✓	✓	✓	✓					367
4	6/15/94	1530	D-061594-WP-102	Soil	2	✓	✓	✓	✓	✓					368

TOTAL NUMBER OF CONTAINERS 8

RELINQUISHED BY: ① Walter J. Pochron	DATE: 6/15/94 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
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Goldenrod	Sampler Copy

SAMPLE TEAM: W. Pochron, K. Johnson

RECEIVED FOR LABORATORY BY:

DATE: TIME:

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HERITAGE ENVIRONMENTAL SERVICES. INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

METALS CASE NARRATIVE

SAMPLE # A314365-368

The matrix spike for Cd and Sb was diluted out due to matrix interference. The samples were not homogenous for Mn. The duplicate failed for two digestions. The following samples were diluted due to matrix interference:

A314365	Cd, Sb
A314366	Cd, Sb
A314368	Sb

Steven J Endersen 7-12-94

STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

EMS LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 243-0360

HERITAGE

CASE NARRATIVE
METALS SECTION

SAMPLE # A314355

THESE SAMPLES WERE ANALYZED USING THE NORMAL PROCEDURES WITH NO MODIFICATIONS.

Steven J. Endersen 7-11-94
STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

EMS LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 243-0360

HERITAGE

CASE NARRATIVE
METALS SECTION

SAMPLE # A314356-362

THESE SAMPLES WERE ANALYZED USING THE NORMAL PROCEDURES WITH NO MODIFICATIONS.

Steven J. Endersen 7-11-94
STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

ICP TRACE METALS	SW846-6010A
pH (AQUEOUS)	SW846-9040
FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES	SW846-3005A
MERCURY CVAA	SW846-7470

CONTROL LIMITS (75-125%R, 20%RPD)

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A314355-A314362, A314365-A314368

Sample #A314355-A314362 and #A314365-A314368 were analyzed using normal procedures with no modifications for the Total Cyanide analysis.

For the Total Organic Carbon analysis of Sample #A314365-A314368, the result reflects the water solubl part of the sample.

Barbara A. Shrake
BARBARA A. SHRAKE
LABORATORY SUPERVISOR
7/13/94

HERITAGE ENVIRONMENTAL SERVICES. INC.

7901 West Morris Street
Indianapolis. IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CYANIDE DISTILLATION	SW846-9010A
CYANIDE. TOTAL (AUTOMATED)	SW846-9012
SULFATE (TURBIDIMETRIC)	SW846-9012
CHLORIDE (COLORIMETRIC, AUTOMATED)	SW846-9251
NITROGEN, NITRATE (COLORIMETRIC AUTOMATED)	EPA 353.2
AMMONIA DISTILLATION	EPA 350.2
AMMONIA NITROGEN	EPA 350.3
ALKALINITY TOTAL	EPA 310.1
TOTAL SUSPENDED SOLIDS	EPA 160.2
DISSOLVED SOLIDS	EPA 160.1

CONTROL LIMITS (75-125% R. 20% RPD)

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SAMPLES A314355-368

The criteria for SW-846 Method 8260A were followed for initial and continuing calibration. We were unable to meet the minimum response factor for the compound bromoform. We believe this is due to the 25 mL purge volume necessary to meet the required detection limits.

The MS/MSD control limits for SW-846 8240A and 8270A were taken directly from the methods. Those that appear on the forms included in this package are our laboratory generated advisory limits which are updated quarterly. There are no limits in method 8260A so we used the advisory limits from the Heritage QAP. All data was put in a spreadsheet so we can generate our own limits for use in the future. Acetone was consistently outside the advisory limits. We believe this is a combination of the 25 mL purge volume and the prevalence of acetone in the laboratory.

The recovery for MIBK was out for A314166 MS/MSD. The concentration in the sample exceeded the linear calibration range.

Samples A314367 and 368 failed to pass surrogate recovery when initially analyzed. They were reanalyzed with improvement. Only the reanalysis is reported.

Some analytes failed in the volatile MS/MSD for A314179. Those analytes passed in the LCS so no corrective action was required.

Sample A314362 failed to pass internal standard area criteria for semi-volatiles. It was reanalyzed with no improvement. Only the original analysis is reported.

Benz(a)anthracene was high in the MS/MSD for A314895 and the LCS. It was not detected in the associated samples so no corrective action was required. The other samples which failed in the MS/MSD passed in the LCS.

There were no other QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

GC GROUP CASE NARRATIVE

SAMPLE # [illegible]

These samples were analyzed using the normal procedures with no modifications.

Lisa Julian

Lisa Julian

GC Groupleader

REVIEWED BY: LJ
DATE 6-28-94

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >6120C Inj Time : 940627 09:18 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.01350	80.51			(Conc=300.00)
Acrylonitrile	.39274	.22486	42.75			(Conc=300.00)
Chloromethane	1.19881	1.11715	6.81		**	
Bromomethane	1.20277	1.39381	15.88			
Vinyl Chloride	.96821	1.11815	15.49	*		
Dichlorodifluoromethane	1.48519	1.82972	23.20			
Chloroethane	.71495	.85151	19.10			
Methylene Chloride	1.49886	1.58883	6.00			
Acetone	.77561	.86525	11.56			
Carbon Disulfide	2.50489	2.16278	13.66			
Trichlorofluoromethane	3.57785	4.39963	22.97			
1,1-Dichloroethene	1.05652	1.14553	8.42	*		
1,1-Dichloroethane	2.66445	2.88049	8.11		**	
[Tetrahydrofuran]	.53124	.47247	11.06			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	.97880	2.33			(Conc=100.00)
Diethyl Ether	.63148	.44506	29.52			
Chloroform	3.40786	3.20984	5.81	*		
Trichloro-trifluoroethane	1.51530	1.32511	12.55			
1,2-Dichloroethane-d4	2.09459	1.96919	5.99			
2-Butanone	.93293	.91957	1.43			
1,2-Dichloroethane	2.52312	2.45947	2.52			
Methyl-t-butyl ether	1.00690	1.07206	6.47			
1,1,1-Trichloroethane	.80579	.89524	11.10			
Carbon Tetrachloride	.82349	.94478	14.73			
Ethyl Acetate	.81490	.78238	3.99			
Vinyl Acetate	.54635	.52566	3.79			
Bromodichloromethane	1.26165	1.36201	7.95			
1,2-Dichloropropane	.47484	.50014	5.33	*		
cis-1,3-Dichloropropene	.90845	1.00462	10.59			
Trichloroethene	.50286	.50788	1.00			
Diisopropyl Ether	1.34489	1.28017	4.81			
2-Chloroethyl Vinyl Ether	.24845	.28342	14.07			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >6120C Inj Time : 940627 09:18 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.52439	15.21			
1,1,2-Trichloroethane	.60604	.66315	9.42			
Benzene	.85252	.90508	6.17	*		
trans-1,3-Dichloropropene	.86673	1.01207	16.77			
Bromoform	1.40695	1.53622	9.19		**	
4-Methyl-2-Pentanone	1.05398	1.16892	10.90			
2-Hexanone	.88764	.92667	4.40			
Tetrachloroethene	.46761	.51607	10.36			
1,1,2,2-Tetrachloroethane	1.10359	1.42349	28.99		**	
Toluene-d8	.91651	.92889	1.35			
Toluene	.60528	.61538	1.67	*		
Chlorobenzene	1.01544	1.12548	10.84		**	
Ethylbenzene	.42381	.45844	8.17	*		
Bromofluorobenzene	1.49381	1.82850	22.40			
Styrene	1.12330	1.30520	16.19			
m-Xylene	.58317	.67591	15.90			
o,p-Xylene	.57853	.64949	12.27			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.94287	26.84			
o,p-Dichlorobenzene	1.45240	1.90597	31.23			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratory, Indianapolis

Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 30 Jun 94 7:34 am
Data File: C:\H063094\7795H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Thu Jun 30 10:32:49 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
2		N-nitroso-dimethylamine	0.36904	0.37291	1.0
3		Pyridine	0.83572	0.77076	7.8
4		2-Picoline	0.88170	0.84041	4.7
5	S	2-Fluorophenol	0.92203	0.87154	5.5
6	S	Phenol-d5	1.02955	0.92944	9.7
7		Aniline	1.27050	1.17817	7.3
8	MC	Phenol	1.12492	1.05741	6.0
9		bis(2-Chloroethyl)ether	0.90784	0.86063	5.2
10	S	2-Chlorophenol-d4	0.96563	0.98603	2.1
11	MC	2-Chlorophenol	0.94615	0.94199	0.4
12		1,3-Dichlorobenzene	1.21961	1.27394	4.5
13	MC	1,4-Dichlorobenzene	1.20732	1.26890	5.1
14	S	1,2-Dichlorobenzene-d4	1.38053	1.42053	2.9
15		1,2-Dichlorobenzene	1.09511	1.18626	8.3
16		Benzyl alcohol	0.54293	0.55910	3.0
17		2-Methylphenol	0.81173	0.78802	2.9
18		bis(2-chloroisopropyl)ether	0.99574	0.85659	14.0
19	MP	n-Nitroso-di-n-propylamine	0.57510	0.57355	0.3
20		4-Methylphenol	0.82877	0.80575	2.8
21		Hexachloroethane	0.43268	0.43817	1.3
22	I	Naphthalene-d8	1.00000	1.00000	0.0
23	S	Nitrobenzene-d5	0.33500	0.32116	4.1
24		Nitrobenzene	0.31907	0.29618	7.2
25		Isophorone	0.64486	0.60519	6.2
26	C	2-Nitrophenol	0.21584	0.22213	2.9
27		2,4-Dimethylphenol	0.28753	0.28328	1.5
28		bis(2-Chloroethoxy)methane	0.38746	0.37018	4.5
29	C	2,4-Dichlorophenol	0.35708	0.37890	6.1
30		Benzoic acid	0.21885	0.18048	17.5
31	M	1,2,4-Trichlorobenzene	0.38365	0.44199	15.2
32		Naphthalene	0.84231	0.85884	2.0
33		4-Chloroaniline	0.32991	0.35818	8.6
34		Toluenediamine	0.00811	0.00651	19.8
35	C	Hexachlorobutadiene	0.14393	0.16707	16.1
36	MC	4-Chloro-3-methylphenol	0.24875	0.24426	1.8
37		2-Methylnaphthalene	0.63547	0.65997	3.9
38	I	Acenaphthene-d10	1.00000	1.00000	0.0
39	P	Hexachlorocyclopentadiene	0.23118	0.20854	9.8
40		1,2,4,5-Tetrachlorobenzene	0.36895	0.41170	11.6
41	C	2,4,6-Trichlorophenol	0.34977	0.39509	13.0
42		2,4,5-Trichlorophenol	0.35883	0.41713	16.2
43	S	2-Fluorobiphenyl	1.25919	1.31487	4.4

Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 30 Jun 94 7:34 am
Data File: C:\H063094\7795H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Thu Jun 30 10:32:49 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Chloronaphthalene	1.08652	1.12062	3.1
45		2-Nitroaniline	0.24437	0.21145	13.5
46		Dimethylphthalate	1.16822	1.20267	2.9
47		1,3-Dinitrobenzene	0.25695	0.25535	0.6
48		2,6-Dinitrotoluene	0.34773	0.34371	1.2
49		Acenaphthylene	1.58561	1.50117	5.3
50		3-Nitroaniline	0.28120	0.23624	16.0
51	MC	Acenaphthene	0.92543	0.90798	1.9
52	P	2,4-Dinitrophenol	0.20783	0.16166	22.2
53	MP	4-Nitrophenol	0.12168	0.09004	26.0
54		Dibenzofuran	1.46307	1.51907	3.8
55	M	2,4-Dinitrotoluene	0.42968	0.42339	1.5
56		2,3,4,6-Tetrachlorophenol	0.25032	0.27049	8.1
57		Diethylphthalate	1.13169	1.13876	0.6
58		Fluorene	1.16322	1.18818	2.1
59		4-Chlorophenyl-phenylether	0.48250	0.56062	16.2
60		4-Nitroaniline	0.28837	0.21354	26.0
61	I	Phenanthrene-d10	1.00000	1.00000	0.0
62		4,6-Dinitro-2-methylphenol	0.15478	0.14099	8.9
63	C	n-Nitrosodiphenylamine	0.54108	0.49939	7.7
64		1,2-Diphenylhydrazine	0.60805	0.46949	22.8
65	S	2,4,6-Tribromophenol	0.16072	0.17493	8.8
66		alpha-BHC	0.12715	0.13002	2.3
67		4-Bromophenyl-phenylether	0.16627	0.17102	2.9
68		Hexachlorobenzene	0.24975	0.28339	13.5
69		beta-BHC	0.09988	0.09725	2.6
70	MC	Pentachlorophenol	0.16322	0.13464	17.5
71		gamma-BHC	0.10453	0.10978	5.0
72		Phenanthrene	0.95533	0.93267	2.4
73		Anthracene	1.01852	0.99301	2.5
74		delta-BHC	0.09396	0.09024	4.0
75		Carbazole	0.86387	0.71524	17.2
76		Heptachlor	0.09197	0.10816	17.6
77		Di-n-butylphthalate	1.09433	0.99716	8.9
78		Aldrin	0.06180	0.06479	4.8
79		Heptachlor epoxide	0.03245	0.02689	17.1
80	C	Fluoranthene	0.83032	0.74574	10.2
81	I	Chrysene-d12	1.00000	1.00000	0.0
82		Benzidine	0.59970	0.37078	38.2
83	M	Pyrene	1.43326	2.07931	45.1
84		alpha-Endosulfan	0.02784	0.04440	59.4
85		p,p'-DDE	0.26069	0.39375	51.0
86	S	Terphenyl-d14	1.05278	1.46003	38.7

Semi-volatile Continuing Calibration Report

Operator ID: JCM Date Acquired: 30 Jun 94 7:34 am
Data File: C:\H063094\7795H.D GC/MS #8 Misc. CC SSTD
Method: CALPEST Title: CLP BNA Calibration
Last Calibration Update: Thu Jun 30 10:32:49 1994

C = CCC Max Dev = 30% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal50 = 7506H.D cal20 = 7507H.D cal80 = 7508H.D
cal120 = 7509H.D cal160 = 7510H.D

PK#		Compound	AvgRRF	CCRRF	%Dev
87		Dieldrin	0.21987	0.27710	26.0
88		Endrin	0.01190	0.01949	63.8
89		Endrin aldehyde	0.02886	0.03495	21.1
90		beta-Endosulfan	0.04932	0.06708	36.0
91		p,p'-DDD	0.48305	0.61040	26.4
92		Butylbenzylphthalate	0.85905	0.89136	3.8
93		Endosulfan sulfate	0.08545	0.11178	30.8
94		p,p'-DDT	0.32764	0.48020	46.6
95		Benzo[a]anthracene	1.08076	1.08644	0.5
96		3,3'-Dichlorobenzidine	0.32567	0.26784	17.8
97		Chrysene	0.95700	0.94128	1.6
98		bis(2-Ethylhexyl)phthalate	1.10886	0.99584	10.2
99	I	Perylene-d12	1.00000	1.00000	0.0
100	C	Di-n-octylphthalate	3.35785	2.98297	11.2
101		Benzo[b]fluoranthene	1.61101	1.62521	0.9
102		Benzo[k]fluoranthene	1.48873	1.48008	0.6
103	C	Benzo[a]pyrene	1.33016	1.29913	2.3
104		Indeno[1,2,3-cd]pyrene	1.10147	1.15533	4.9
105		Dibenz[a,h]anthracene	0.89244	0.92823	4.0
106		Benzo[g,h,i]perylene	0.86872	0.93047	7.1

(#) = Out of Range (Advisory for non-CCC)

SEMI-VOLATILES ANALYSIS-SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7796H SVL# 786-754

ANALYSIS DATE/TIME: 6/30/94 08:28

PREP DATE: 6/22/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/KG	330
Acenapthylene	BDL	uG/KG	330
Anthracene	BDL	uG/KG	330
Benz(a)anthracene	BDL	uG/KG	330
Benzo(a)pyrene	BDL	uG/KG	330
Benzo(b)fluoranthene	BDL	uG/KG	330
Benzo(ghi)perylene	BDL	uG/KG	330
Benzo(k)fluoranthene	BDL	uG/KG	330
Benzyl Alcohol	BDL	uG/KG	330
Benzylbutylphthalate	BDL	uG/KG	330
Bis(2-chloroethoxy)methane	BDL	uG/KG	330
Bis(2-chloroethyl)ether	BDL	uG/KG	330
Bis(2-chloroisopropyl)ether	BDL	uG/KG	330
Bis(2-ethylhexyl)phthalate	BDL	uG/KG	330
4-Bromophenylphenylether	BDL	uG/KG	330
Carbazole	BDL	uG/KG	330
4-Chloroaniline	BDL	uG/KG	330
2-Chloronaphthalene	BDL	uG/KG	330
4-Chlorophenylphenylether	BDL	uG/KG	330
Chrysene	BDL	uG/KG	330
Dibenz(a,h)anthracene	BDL	uG/KG	330
Dibenzofuran	BDL	uG/KG	330
1,2-Dichlorobenzene	BDL	uG/KG	330
1,3-Dichlorobenzene	BDL	uG/KG	330
1,4-Dichlorobenzene	BDL	uG/KG	330
3,3' -Dichlorobenzidine	BDL	uG/KG	660
Diethylphthalate	BDL	uG/KG	330
Dimethylphthalate	BDL	uG/KG	330
Di-n-butylphthalate	BDL	uG/KG	330
Dinitrobenzenes	BDL	uG/KG	1600
2,4-Dinitrotoluene	BDL	uG/KG	330
2,6-Dinitrotoluene	BDL	uG/KG	330
Di-n-octylphthalate	BDL	uG/KG	330
Fluoranthene	BDL	uG/KG	330
Fluorene	BDL	uG/KG	330
Hexachlorobenzene	BDL	uG/KG	330
Hexachlorobutadiene	BDL	uG/KG	330
Hexachlorocyclopentadiene	BDL	uG/KG	330
Hexachloroethane	BDL	uG/KG	330
Indeno(1,2,3-cd)pyrene	BDL	uG/KG	330
Isophorone	BDL	uG/KG	330
2-Methylnaphthalene	BDL	uG/KG	330
Naphthalene	BDL	uG/KG	330

MASS SPEC FILE: >7796H

2-Nitroaniline.....	BDL	uG/KG	1600
3-Nitroaniline.....	BDL	uG/KG	1600
4-Nitroaniline.....	BDL	uG/KG	1600
Nitrobenzene.....	BDL	uG/KG	330
N-Nitroso-diphenylamine.....	BDL	uG/KG	330
N-Nitroso-di-n-propylamine.....	BDL	uG/KG	330
Phenanthrene.....	BDL	uG/KG	330
2-Picoline.....	BDL	uG/KG	1600
Pyrene.....	BDL	uG/KG	330
Pyridine.....	BDL	uG/KG	1600
Tetrachlorobenzenes.....	BDL	uG/KG	330
Toluenediamine.....	BDL	uG/KG	1600
1,2,4-Trichlorobenzene.....	BDL	uG/KG	330
Benzoic Acid.....	BDL	uG/KG	1600
4-Chloro-3-methylphenol.....	BDL	uG/KG	330
2-Chlorophenol.....	BDL	uG/KG	330
2,4-Dichlorophenol.....	BDL	uG/KG	330
2,4-Dimethylphenol.....	BDL	uG/KG	330
4,6-Dinitro-2-methylphenol.....	BDL	uG/KG	1600
2,4-Dinitrophenol.....	BDL	uG/KG	1600
2-Methylphenol.....	BDL	uG/KG	330
4-Methylphenol.....	BDL	uG/KG	330
2-Nitrophenol.....	BDL	uG/KG	330
4-Nitrophenol.....	BDL	uG/KG	1600
Pentachlorophenol.....	BDL	uG/KG	1600
Phenol.....	BDL	uG/KG	330
Tetrachlorophenol.....	BDL	uG/KG	330
2,4,5-Trichlorophenol.....	BDL	uG/KG	1600
2,4,6-Trichlorophenol.....	BDL	uG/KG	330

SURROGATE LIST			spike conc
2-Fluorophenol.....	72	% Rec	3300
Phenol-d5.....	78	% Rec	3300
Nitrobenzene-d5.....	77	% Rec	1600
2-Fluorobiphenyl.....	77	% Rec	1600
2,4,6-Tribromophenol.....	57	% Rec	3300
Terpnenyl-d14.....	75	% Rec	1600

( ) = ESTIMATED CONCENTRATION

SEMI-VOLATILES ANALYSIS-SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7071F SVL# 786-754

ANALYSIS DATE/TIME: 7/12/94 06:04

PREP DATE: 6/22/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/KG	330
Acenapthylene	BDL	uG/KG	330
Anthracene	BDL	uG/KG	330
Benz(a)anthracene	BDL	uG/KG	330
Benzo(a)pyrene	BDL	uG/KG	330
Benzo(b)fluoranthene	BDL	uG/KG	330
Benzo(ghi)perylene	BDL	uG/KG	330
Benzo(k)fluoranthene	BDL	uG/KG	330
Benzyl Alcohol	BDL	uG/KG	330
Benzylbutylphthalate	BDL	uG/KG	330
Bis(2-chloroethoxy)methane	BDL	uG/KG	330
Bis(2-chloroethyl)ether	BDL	uG/KG	330
Bis(2-chloroisopropyl)ether	BDL	uG/KG	330
Bis(2-ethylhexyl)phthalate	BDL	uG/KG	330
4-Bromophenylphenylether	BDL	uG/KG	330
Carbazole	BDL	uG/KG	330
4-Chloroaniline	BDL	uG/KG	330
2-Chloronaphthalene	BDL	uG/KG	330
4-Chlorophenylphenylether	BDL	uG/KG	330
Chrysene	BDL	uG/KG	330
Dibenz(a,h)anthracene	BDL	uG/KG	330
Dibenzofuran	BDL	uG/KG	330
1,2-Dichlorobenzene	BDL	uG/KG	330
1,3-Dichlorobenzene	BDL	uG/KG	330
1,4-Dichlorobenzene	BDL	uG/KG	330
3,3' -Dichlorobenzidine	BDL	uG/KG	660
Diethylphthalate	BDL	uG/KG	330
Dimethylphthalate	BDL	uG/KG	330
Di-n-butylphthalate	BDL	uG/KG	330
Dinitrobenzenes	BDL	uG/KG	1600
2,4-Dinitrotoluene	BDL	uG/KG	330
2,6-Dinitrotoluene	BDL	uG/KG	330
Di-n-octylphthalate	BDL	uG/KG	330
Fluoranthene	BDL	uG/KG	330
Fluorene	BDL	uG/KG	330
Hexachlorobenzene	BDL	uG/KG	330
Hexachlorobutadiene	BDL	uG/KG	330
Hexachlorocyclopentadiene	BDL	uG/KG	330
Hexachloroethane	BDL	uG/KG	330
Indeno(1,2,3-cd)pyrene	BDL	uG/KG	330
Isophorone	BDL	uG/KG	330
2-Methylnaphthalene	BDL	uG/KG	330
Naphthalene	BDL	uG/KG	330

MASS SPEC FILE: >7071F

2-Nitroaniline.....	BDL	uG/KG	1600
3-Nitroaniline.....	BDL	uG/KG	1600
4-Nitroaniline.....	BDL	uG/KG	1600
Nitrobenzene.....	BDL	uG/KG	330
N-Nitroso-diphenylamine.....	BDL	uG/KG	330
N-Nitroso-di-n-propylamine.....	BDL	uG/KG	330
Phenanthrene.....	BDL	uG/KG	330
2-Picoline.....	BDL	uG/KG	1600
Pyrene.....	BDL	uG/KG	330
Pyridine.....	BDL	uG/KG	1600
Tetrachlorobenzenes.....	BDL	uG/KG	330
Toluenediamine.....	BDL	uG/KG	1600
1,2,4-Trichlorobenzene.....	BDL	uG/KG	330
Benzoic Acid.....	BDL	uG/KG	1600
4-Chloro-3-methylphenol.....	BDL	uG/KG	330
2-Chlorophenol.....	BDL	uG/KG	330
2,4-Dichlorophenol.....	BDL	uG/KG	330
2,4-Dimethylphenol.....	BDL	uG/KG	330
4,6-Dinitro-2-methylphenol.....	BDL	uG/KG	1600
2,4-Dinitrophenol.....	BDL	uG/KG	1600
2-Methylphenol.....	BDL	uG/KG	330
4-Methylphenol.....	BDL	uG/KG	330
2-Nitrophenol.....	BDL	uG/KG	330
4-Nitrophenol.....	BDL	uG/KG	1600
Pentachlorophenol.....	BDL	uG/KG	1600
Phenol.....	BDL	uG/KG	330
Tetrachlorophenol.....	BDL	uG/KG	330
2,4,5-Trichlorophenol.....	BDL	uG/KG	1600
2,4,6-Trichlorophenol.....	BDL	uG/KG	330

SURROGATE LIST			spike conc
2-Fluorophenol.....	74	% Rec	3300
Phenol-d5.....	79	% Rec	3300
Nitrobenzene-d5.....	82	% Rec	1600
2-Fluorobiphenyl.....	92	% Rec	1600
2,4,6-Tribromophenol.....	55	% Rec	3300
Terphenyl-d14.....	107	% Rec	1600

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis

SW846-8240 Volatile Continuing Calibration Check

File ID : >6160C Inj Time : 940629 05:46 ID File : CLPVOL::A2

Analyst : REGI Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 10 uG/L ->5565C 20 uG/L ->5566C
50 uG/L ->5567C 100 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.00662	90.45			(Conc=300.00)
Acrylonitrile	.39274	.11059	71.84			(Conc=300.00)
Chloromethane	1.19881	.91116	23.99		**	
Bromomethane	1.20277	1.24496	3.51			
Vinyl Chloride	.96821	1.04275	7.70	*		
Dichlorodifluoromethane	1.48519	1.22159	17.75			
Chloroethane	.71495	.69600	2.65			
Methylene Chloride	1.49886	1.54350	2.98			
Acetone	.77561	.71572	7.72			
Carbon Disulfide	2.50489	2.32279	7.27			
Trichlorofluoromethane	3.57785	4.09185	14.37			
1,1-Dichloroethene	1.05652	1.11183	5.24	*		
1,1-Dichloroethane	2.66445	2.71344	1.84		**	
[Tetrahydrofuran]	.53124	.38771	27.02			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	1.07275	7.04			(Conc=100.00)
Diethyl Ether	.63148	.53452	15.35			
Chloroform	3.40786	3.05615	10.32	*		
Trichloro-trifluoroethane	1.51530	1.64547	8.59			
1,2-Dichloroethane-d4	2.09459	1.96642	6.12			
2-Butanone	.93293	.68830	26.22			
1,2-Dichloroethane	2.52312	2.46320	2.37			
Methyl-t-butyl ether	1.00690	1.05375	4.65			
1,1,1-Trichloroethane	.80579	1.04276	29.41			
Carbon Tetrachloride	.82349	1.07183	30.16			
Ethyl Acetate	.81490	.61070	25.06			
Vinyl Acetate	.54635	.43480	20.42			
Bromodichloromethane	1.26165	1.43144	13.46			
1,2-Dichloropropane	.47484	.48442	2.02	*		
cis-1,3-Dichloropropene	.90845	.95701	5.35			
Trichloroethene	.50286	.53820	7.03			
Diisopropyl Ether	1.34489	1.31939	1.90			
2-Chloroethyl Vinyl Ether	.24845	.26465	6.52			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >6160C Inj Time : 940629 05:46 ID File : CLPVOL::A2

Analyst : REGI Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 10 uG/L ->5565C 20 uG/L ->5566C
50 uG/L ->5567C 100 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.42123	7.41			
1,1,2-Trichloroethane	.60604	.58897	2.82			
Benzene	.85252	.95607	12.15	*		
trans-1,3-Dichloropropene	.86673	.94345	8.85			
Bromoform	1.40695	1.47541	4.87		**	
4-Methyl-2-Pentanone	1.05398	.89542	15.04			
2-Hexanone	.88764	.72927	17.84			
Tetrachloroethene	.46761	.56476	20.78			
1,1,2,2-Tetrachloroethane	1.10359	1.31553	19.20		**	
Toluene-d8	.91651	.97464	6.34			
Toluene	.60528	.65078	7.52	*		
Chlorobenzene	1.01544	1.11454	9.76		**	
Ethylbenzene	.42381	.49365	16.48	*		
Bromofluorobenzene	1.49381	1.68220	12.61			
Styrene	1.12330	1.28006	13.95			
m-Xylene	.58317	.66934	14.78			
o,p-Xylene	.57853	.65906	13.92			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.97656	29.04			
o,p-Dichlorobenzene	1.45240	1.78270	22.74			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >0113B SVL# 782-033

ANALYSIS DATE/TIME: 6/20/94 21:28

PREP DATE: 6/16/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzyl Alcohol	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
Dinitrobenzenes	BDL	uG/L	50
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

MASS SPEC FILE: >0113B

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
2-Picoline.....	BDL	uG/L	50
Pyrene.....	BDL	uG/L	10
Pyridine.....	BDL	uG/L	50
Tetrachlorobenzenes.....	BDL	uG/L	10
Toluenediamine.....	BDL	uG/L	50
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
Benzoic Acid.....	BDL	uG/L	50
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	81	% Rec	100
Phenol-d5.....	57	% Rec	100
Nitrobenzene-d5.....	69	% Rec	50
2-Fluorobiphenyl.....	80	% Rec	50
2,4,6-Tribromophenol.....	147	% Rec	100
Terphenyl-d14.....	140	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0284B Inj Time : 940707 15:05 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.94857	.66113	30.30			(Conc=50.00)
Pyridine	1.46811	1.36334	7.14			
2-Picoline	1.27932	1.21088	5.35			
2-Fluorophenol	1.31401	1.27507	2.96			
Aniline	1.78257	1.73482	2.68			
Phenol-d6	1.66829	1.71791	2.97			
Phenol	1.95813	1.92535	1.67	*		
bis(2-chloroethyl)ether	1.70737	1.54629	9.43			
2-Chlorophenol-d4	1.47723	1.37084	7.20			
2-Chlorophenol	1.57108	1.46694	6.63			
1,3-Dichlorobenzene	1.50504	1.44932	3.70			
1,4-Dichlorobenzene	1.58563	1.51409	4.51	*		
Benzyl alcohol	.95166	.93475	1.78			
1,2-Dichlorobenzene	1.55410	1.49398	3.87			
1,2-Dichlorobenzene-d4	1.67651	1.57183	6.24			
2-Methylphenol	1.27838	1.20990	5.36			
bis(2-chloroisopropyl)ether	.92113	.64941	29.50			
4-Methylphenol	1.38032	1.40753	1.97			
N-Nitroso-di-n-propylamine	.98656	.84112	14.74		**	
Hexachloroethane	.61676	.55502	10.01			
Nitrobenzene-d5	.37671	.32187	14.56			
Nitrobenzene	.37160	.43098	15.98			
Isophorone	.70429	.61895	12.12			
2-Nitrophenol	.21146	.19879	5.99	*		
2,4-Dimethylphenol	.27784	.26787	3.59			
Benzoic acid	.13903	.20843	49.91			
bis(2-Chloroethoxy)methane	.49618	.41431	16.50			
2,4-Dichlorophenol	.29435	.29549	.39	*		
1,2,4-Trichlorobenzene	.30872	.28362	8.13			
Naphthalene	1.06413	1.01372	4.74			
4-Chloroaniline	.34812	.39660	13.93			
Hexachlorobutadiene	.15188	.13568	10.67	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0284B Inj Time : 940707 15:05 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.25559	.27561	7.83	*	
2-Methylnaphthalene	.87434	.87970	.61		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.66715	.58961	11.62		
Hexachlorocyclopentadiene	.35979	.15889	55.84		**
2,4,6-Trichlorophenol	.44292	.40878	7.71	*	
2,4,5-Trichlorophenol	.41194	.41613	1.02		
2-Chloronaphthalene	1.34710	1.26508	6.09		
2-Fluorobiphenyl	1.40674	1.30558	7.19		
2-Nitroaniline	.34385	.30863	10.24		
1,3-Dinitrobenzene	.24390	.24536	.59		
Dimethylphthalate	1.23291	1.21513	1.44		
Acenaphthylene	2.07334	1.91999	7.40		
2,6-Dinitrotoluene	.27075	.32821	21.22		
3-Nitroaniline	.31002	.38912	25.52		
Acenaphthene	1.24717	1.18965	4.61	*	
2,4-Dinitrophenol	.13411	.17892	33.41		**
4-Nitrophenol	.08794	.09939	13.03		**
Dibenzofuran	1.65910	1.52959	7.81		
2,4-Dinitrotoluene	.35491	.37594	5.93		
2,3,4,6-Tetrachlorophenol	.21267	.24128	13.45		
Diethylphthalate	1.14545	1.13853	.60		
4-Chlorophenyl-phenylether	.59122	.54304	8.15		
Fluorene	1.22588	1.18673	3.19		
4-Nitroaniline	.26026	.34250	31.60		
2,4,6-Tribromophenol	.12297	.15440	25.56		
4,6-Dinitro-2-methylphenol	.12312	.12048	2.15		
N-Nitrosodiphenylamine (1)	.50719	.47000	7.33	*	
4-Bromophenyl-phenylether	.25338	.20507	19.06		
Hexachlorobenzene	.31612	.25374	19.73		
Pentachlorophenol	.11075	.12342	11.44	*	
Phenanthrene	1.15073	1.06625	7.34		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0284B Inj Time : 940707 15:05 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07983	.91129	15.61			
Carbazole	1.85331	1.82799	1.37			
Di-n-butylphthalate	1.22060	1.12076	8.18			
Fluoranthene	.81734	.88407	8.16	*		
alpha-BHC	.13821	.11851	14.25			
beta-BHC	.08573	.08076	5.79			
gamma-BHC (Lindane)	.10054	.07850	21.92			
1,2-Diphenylhydrazine	1.18877	.89781	24.48			
delta-BHC	.08271	.07481	9.55			
Heptachlor	.11519	.08940	22.39			
Aldrin	.07806	.06013	22.97			
Heptachlor epoxide	.04521	.03819	15.55			
Benzidine	.29866	.19369	35.15			(Conc=50.00)
Pyrene	1.82819	1.43089	21.73			
Terphenyl-d14	1.24424	1.03798	16.58			
Butylbenzylphthalate	.67370	.65148	3.30			
3,3'-Dichlorobenzidine	.31154	.37021	18.83			
Benzo(a)anthracene	1.32474	1.33468	.75			
Chrysene	.97421	.81963	15.87			
bis(2-Ethylhexyl)phthalate	.85604	.90510	5.73			
alpha-Endosulfan	.04456	.03118	30.03			
Dieldrin	.38804	.28631	26.21			
p,p'-DDE	.33230	.25706	22.64			
Endrin	.07792	.05552	28.75			
beta-Endosulfan	.03932	.03310	15.83			
p,p'-DDD	.49588	.41725	15.86			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.08158	.07231	11.37			
p,p'-DDT	.40530	.36509	9.92			
Di-n-octylphthalate	2.41980	2.61128	7.91	*		
Benzo(b)fluoranthene	1.72469	1.96005	13.65			
Benzo(k)fluoranthene	1.30765	1.25086	4.34			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (*

Continuing Calibration Check
HSL Compounds

Case No: | Calibration Date: 07/07/94

Contractor: | Time: 15:05

Contract No: | Laboratory ID: >0284B

Instrument ID: GCMS#2 | Initial Calibration Date: 06/22/94

Minimum $\overline{RF}$ for SPCC is 0.05 | Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34647	1.45648	8.17	*	
Indeno(1,2,3-cd)pyrene	.87735	.91302	4.07		
Dibenz(a,h)anthracene	.79481	.90935	14.41		
Benzo(g,h,i)perylene	.87112	.89481	2.72		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0300B Inj Time : 940708 10:49 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::84

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.94857	1.03606	9.22			(Conc=50.00)
Pyridine	1.46811	1.28481	12.49			
2-Picoline	1.27932	1.34169	4.88			
2-Fluorophenol	1.31401	1.34977	2.72			
Aniline	1.78257	1.74972	1.84			
Phenol-d6	1.66829	1.74105	4.36			
Phenol	1.95813	1.93451	1.21	*		
bis(2-chloroethyl)ether	1.70737	1.62832	4.63			
2-Chlorophenol-d4	1.47723	1.39248	5.74			
2-Chlorophenol	1.57108	1.49191	5.04			
1,3-Dichlorobenzene	1.50504	1.45291	3.46			
1,4-Dichlorobenzene	1.58563	1.53522	3.18	*		
Benzyl alcohol	.95166	.92141	3.18			
1,2-Dichlorobenzene	1.55410	1.48799	4.25			
1,2-Dichlorobenzene-d4	1.67651	1.62070	3.33			
2-Methylphenol	1.27838	1.22077	4.51			
bis(2-chloroisopropyl)ether	.92113	.62882	31.73			
4-Methylphenol	1.38032	1.37843	.14			
N-Nitroso-di-n-propylamine	.98656	.81841	17.04		**	
Hexachloroethane	.61676	.56927	7.70			
Nitrobenzene-d5	.37671	.32476	13.79			
Nitrobenzene	.37160	.43472	16.98			
Isophorone	.70429	.60540	14.04			
2-Nitrophenol	.21146	.19834	6.21	*		
2,4-Dimethylphenol	.27784	.26524	4.53			
Benzoic acid	.13903	.16784	20.72			
bis(2-Chloroethoxy)methane	.49618	.40729	17.91			
2,4-Dichlorophenol	.29435	.28455	3.33	*		
1,2,4-Trichlorobenzene	.30872	.28905	6.37			
Naphthalene	1.06413	.99556	6.44			
4-Chloroaniline	.34812	.38583	10.83			
Hexachlorobutadiene	.15188	.13818	9.02	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0300B Inj Time : 940708 10:49 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::84

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.25559	.23582	7.73	*	
2-Methylnaphthalene	.87434	.80553	7.87		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.66715	.60161	9.82		
Hexachlorocyclopentadiene	.35979	.15655	56.49		**
2,4,6-Trichlorophenol	.44292	.38325	13.47	*	
2,4,5-Trichlorophenol	.41194	.37590	8.75		
2-Chloronaphthalene	1.34710	1.24886	7.29		
2-Fluorobiphenyl	1.40674	1.31285	6.67		
2-Nitroaniline	.34385	.26348	23.37		
1,3-Dinitrobenzene	.24390	.22100	9.39		
Dimethylphthalate	1.23291	1.15170	6.59		
Acenaphthylene	2.07334	1.81861	12.29		
2,6-Dinitrotoluene	.27075	.29765	9.94		
3-Nitroaniline	.31002	.34283	10.59		
Acenaphthene	1.24717	1.15500	7.39	*	
2,4-Dinitrophenol	.13411	.16294	21.49		**
4-Nitrophenol	.08794	.08867	.84		**
Dibenzofuran	1.65910	1.43733	13.37		
2,4-Dinitrotoluene	.35491	.34555	2.64		
2,3,4,6-Tetrachlorophenol	.21267	.21304	.17		
Diethylphthalate	1.14545	.97967	14.47		
4-Chlorophenyl-phenylether	.59122	.50936	13.85		
Fluorene	1.22588	1.07264	12.50		
4-Nitroaniline	.26026	.26550	2.01		
2,4,6-Tribromophenol	.12297	.12055	1.97		
4,6-Dinitro-2-methylphenol	.12312	.11674	5.18		
N-Nitrosodiphenylamine (1)	.50719	.45264	10.76	*	
4-Bromophenyl-phenylether	.25338	.21446	15.36		
Hexachlorobenzene	.31612	.25405	19.63		
Pentachlorophenol	.11075	.12066	8.95	*	
Phenanthrene	1.15073	1.04259	9.40		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0300B Inj Time : 940708 10:49 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07983	.89645	16.98			
Carbazole	1.85331	1.67236	9.76			
Di-n-butylphthalate	1.22060	1.07863	11.63			
Fluoranthene	.81734	.79922	2.22	*		
alpha-BHC	.13821	.11631	15.84			
beta-BHC	.08573	.07170	16.36			
gamma-BHC (Lindane)	.10054	.08002	20.41			
1,2-Diphenylhydrazine	1.18877	.89258	24.92			
delta-BHC	.08271	.07005	15.31			
Heptachlor	.11519	.08813	23.49			
Aldrin	.07806	.06383	18.22			
Heptachlor epoxide	.04521	.03461	23.45			
Benzidine	.29866	.16435	44.97			(Conc=50.00)
Pyrene	1.82819	1.46706	19.75			
Terphenyl-d14	1.24424	1.01272	18.61			
Butylbenzylphthalate	.67370	.60157	10.71			
3,3'-Dichlorobenzidine	.31154	.33142	6.38			
Benzo(a)anthracene	1.32474	1.37833	4.04			
Chrysene	.97421	.87451	10.23			
bis(2-Ethylhexyl)phthalate	.85604	.83329	2.66			
alpha-Endosulfan	.04456	.03407	23.53			
Dieldrin	.38804	.28434	26.72			
p,p'-DDE	.33230	.27337	17.73			
Endrin	.07792	.05979	23.26			
beta-Endosulfan	.03932	.03125	20.51			
p,p'-DDD	.49588	.42321	14.65			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.08158	.07079	13.22			
p,p'-DDT	.40530	.34854	14.00			
Di-n-octylphthalate	2.41980	2.34118	3.25	*		
Benzo(b)fluoranthene	1.72469	1.95365	13.28			
Benzo(k)fluoranthene	1.30765	1.24376	4.89			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 07/08/94

Contractor:

Time: 10:49

Contract No:

Laboratory ID: >0300B

Instrument ID: GCMS#2

Initial Calibration Date: 06/22/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34647	1.38041	2.52	*	
Indeno(1,2,3-cd)pyrene	.87735	.87018	.82		
Dibenz(a,h)anthracene	.79481	.88574	11.44		
Benzo(g,h,i)perylene	.87112	.86741	.42		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 24 Jun 94 6:34 am
Data File: C:\I062494\6460J.D GCMS#9 Misc. CALIBRATION CHECK 6/24/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Thu Jun 23 09:22:21 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#	Compound	AvgRRF	CCRRF	%Dev
1 I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2	Dichlorodifluoromethane	0.50012	0.39547	20.9
3	Chloromethane	0.38332	0.27402	28.5
4	Vinyl Chloride	0.32516	0.24936	23.3
5	Bromomethane	0.39330	0.32885	16.4
6	Chloroethane	0.19574	0.16707	14.6
7	Trichlorofluoromethane	0.79094	0.75775	4.2
8	Acrolein	0.00327	0.01426	336.4
9	Acetone	0.02002	0.01386	30.8
10	1,1-Dichloroethene	0.41655	0.32951	20.9
11	Methylene Chloride	0.37032	0.23660	36.1
12	Acrylonitrile	0.01757	0.09840	460.1
13	Carbon Disulfide	1.18635	0.83182	29.9
14	Vinyl Acetate	0.36512	0.20183	44.7
15	trans-1,2-Dichloroethene	0.46335	0.36554	21.1
16	1,1-Dichloroethane	0.77566	0.63419	18.2
17	2-Butanone	0.03840	0.02510	34.6
18	cis-1,2-Dichloroethene	0.45198	0.34397	23.9
19	Chloroform	0.79409	0.65356	17.7
20	Bromochloromethane	0.15972	0.12636	20.9
21	2,2-Dichloropropane	0.59917	0.57462	4.1
22	1,1,1-Trichloroethane	0.72319	0.71011	1.8
23	Iodomethane	0.99715	0.80538	19.2
24 I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25	1,1-Dichloropropene	0.20283	0.19558	3.6
26 S	1,2-Dichloroethane-d4	0.21713	0.20539	5.4
27	Carbon Tetrachloride	0.59804	0.63769	6.6
28	1,2-Dichloroethane	0.27408	0.25564	6.7
29	Benzene	1.12326	0.92144	18.0
30	Trichloroethene	0.49683	0.47944	3.5
31	1,2-Dichloropropane	0.42006	0.34413	18.1
32	Bromodichloromethane	0.61387	0.48287	21.3
33	Dibromomethane	0.24328	0.18978	22.0
34	4-Methyl-2-Pentanone	0.20470	0.11289	44.9
35	2-Chloroethylvinylether	0.08005	0.03308	58.7
36	cis-1,3-Dichloropropene	0.46166	0.39283	14.9
37 S	Toluene-d8	1.04582	1.05359	0.7
38	Toluene	1.26584	1.16050	8.3
39	trans-1,3-Dichloropropene	0.31213	0.26374	15.5
40	1,1,2-Trichloroethane	0.21141	0.16925	19.9
41	1,2-Dibromoethane	0.28445	0.24389	14.3
42 S	4-Bromofluorobenzene	0.62761	0.59277	5.6
43 I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Heritage Laboratory, Indianapolis
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 24 Jun 94 6:34 am
Data File: C:\I062494\6460J.D GCMS#9 Misc. CALIBRATION CHECK 6/24/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Thu Jun 23 09:22:21 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#	Compound	AvgRRF	CCRRF	%Dev
44	2-Hexanone	0.11569	0.07593	34.4
45	1,3-Dichloropropane	0.44805	0.35923	19.8
46	Tetrachloroethene	0.76995	0.85123	10.6
47	Dibromochloromethane	0.47966	0.42137	12.2
48	Chlorobenzene	1.15921	1.12917	2.6
49	1,1,1,2-Tetrachloroethane	0.52593	0.50025	4.9
50	Ethyl Benzene	0.63051	0.66679	5.8
51	o,m-Xylene	0.79619	0.82755	3.9
52	p-Xylene	0.71928	0.71884	0.1
53	Styrene	1.15837	1.11757	3.5
54	Bromoform	0.23071	0.23184	0.5
55 I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56	Isopropylbenzene	3.48645	3.83204	9.9
57	trans-1,4-Dichloro-2-butene	0.02892	0.02376	17.8
58	1,1,2,2-Tetrachloroethane	0.44868	0.40333	10.1
59	Bromobenzene	1.58568	1.41671	10.7
60	1,2,3-Trichloropropane	0.29220	0.19145	34.5
61	n-Propylbenzene	0.48860	0.49064	0.4
62	1,3,5-Trimethylbenzene	2.61938	3.12964	19.5
63	2-Chlorotoluene	0.73236	0.76692	4.7
64	4-Chlorotoluene	0.73839	0.73822	0.0
65	t-Butylbenzene	2.58756	2.97352	14.9
66	1,2,4-Trimethylbenzene	2.56215	2.95335	15.3
67	sec-Butylbenzene	4.22555	4.66398	10.4
68	p-Isopropyltoluene	2.87246	3.49233	21.6
69	1,3-Dichlorobenzene	1.56747	1.51199	3.5
70	1,4-Dichlorobenzene	1.51852	1.42968	5.9
71	n-Butylbenzene	2.03280	2.20230	8.3
72	1,2-Dichlorobenzene	1.18051	1.09400	7.3
73	1,2-Dibromo-3-chloropropane	0.09531	0.07812	18.0
74	1,2,4-Trichlorobenzene	0.87256	0.95972	10.0
75	Naphthalene	0.80810	0.69476	14.0
76	Hexachlorobutadiene	0.91731	1.13988	24.3
77	1,2,3-Trichlorobenzene	0.66289	0.70009	5.6

(#) = Out of Range (Advisory for non-CCC)

ANALYSIS METHOD: SW846-8260

MASS SPEC FILE: >6461J
ANALYSIS DATE/TIME: 6/24/94 7:31

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	10
Benzene	BDL	uG/L	1
Bromodichloromethane	BDL	uG/L	1
Bromoform	BDL	uG/L	1
Bromomethane	BDL	uG/L	1
Carbon disulfide	BDL	uG/L	1
Carbon tetrachloride	BDL	uG/L	1
Chlorobenzene	BDL	uG/L	1
Chloroethane	BDL	uG/L	1
Chloroform	BDL	uG/L	1
Chloromethane	BDL	uG/L	1
Dibromochloromethane	BDL	uG/L	1
cis-1,3-Dichloropropene	BDL	uG/L	1
1,1-Dichloroethane	BDL	uG/L	1
1,2-Dichloroethane	BDL	uG/L	1
1,1-Dichloroethene	BDL	uG/L	1
1,2-Dichloropropane	BDL	uG/L	1
Ethylbenzene	BDL	uG/L	1
Fluorotrichloromethane	BDL	uG/L	1
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	1
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	1
1,1,2,2-Tetrachloroethane	BDL	uG/L	1
Tetrachloroethene	BDL	uG/L	1
Toluene	BDL	uG/L	1
1,2-Dichloroethene (total)	BDL	uG/L	1
trans-1,3-Dichloropropene	BDL	uG/L	1
1,1,1-Trichloroethane	BDL	uG/L	1
1,1,2-Trichloroethane	BDL	uG/L	1
Trichloroethene	BDL	uG/L	1
Vinyl chloride	BDL	uG/L	1
Xylenes (total)	BDL	uG/L	1

SURROGATE LIST		
Dichloroethane-d4	92	% Rec
Toluene-d8	99	% Rec
Bromofluorobenzene	96	% Rec

( ) = ESTIMATED CONCENTRATION

Heritage Laboratory, Inc.
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 25 Jun 94 3:39 am
Data File: C:\I062594\6480J.D GCMS#9 Misc. CALIBRATION CHECK 6/25/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 24 07:16:51 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2		Dichlorodifluoromethane	0.50012	0.39636	20.7
3		Chloromethane	0.38332	0.29166	23.9
4		Vinyl Chloride	0.32516	0.26615	18.1
5		Bromomethane	0.39330	0.35254	10.4
6		Chloroethane	0.19574	0.15602	20.3
7		Trichlorofluoromethane	0.79094	0.76642	3.1
8		Acrolein	0.00327	0.01687	416.2
9		Acetone	0.02002	0.01420	29.1
10		1,1-Dichloroethene	0.41655	0.34149	18.0
11		Methylene Chloride	0.37032	0.25264	31.8
12		Acrylonitrile	0.01757	0.10566	501.5
13		Carbon Disulfide	1.18635	0.88106	25.7
14		Vinyl Acetate	0.36512	0.24443	33.1
15		trans-1,2-Dichloroethene	0.46335	0.37987	18.0
16		1,1-Dichloroethane	0.77566	0.66630	14.1
17		2-Butanone	0.03840	0.02619	31.8
18		cis-1,2-Dichloroethene	0.45198	0.35993	20.4
19		Chloroform	0.79409	0.68643	13.6
20		Bromochloromethane	0.15972	0.13291	16.8
21		2,2-Dichloropropane	0.59917	0.58648	2.1
22		1,1,1-Trichloroethane	0.72319	0.72087	0.3
23		Iodomethane	0.99715	0.86571	13.2
24	I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25		1,1-Dichloropropene	0.20283	0.19405	4.3
26	S	1,2-Dichloroethane-d4	0.21713	0.20125	7.3
27		Carbon Tetrachloride	0.59804	0.62573	4.6
28		1,2-Dichloroethane	0.27408	0.25525	6.9
29		Benzene	1.12326	0.95975	14.6
30		Trichloroethene	0.49683	0.49407	0.6
31		1,2-Dichloropropane	0.42006	0.36079	14.1
32		Bromodichloromethane	0.61387	0.49668	19.1
33		Dibromomethane	0.24328	0.20460	15.9
34		4-Methyl-2-Pentanone	0.20470	0.11251	45.0
35		2-Chloroethylvinylether	0.08005	0.02578	67.8
36		cis-1,3-Dichloropropene	0.46166	0.40082	13.2
37	S	Toluene-d8	1.04582	1.07020	2.3
38		Toluene	1.26584	1.19563	5.5
39		trans-1,3-Dichloropropene	0.31213	0.26948	13.7
40		1,1,2-Trichloroethane	0.21141	0.17672	16.4
41		1,2-Dibromoethane	0.28445	0.24703	13.2
42	S	4-Bromofluorobenzene	0.62761	0.61422	2.1
43	I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 25 Jun 94 8:39 am
Data File: C:\I062594\6480J.D GCMS#9 Misc. CALIBRATION CHECK 6/25/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 24 07:16:51 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Hexanone	0.11569	0.08142	29.6
45		1,3-Dichloropropane	0.44805	0.37422	16.5
46		Tetrachloroethene	0.76995	0.85014	10.4
47		Dibromochloromethane	0.47966	0.41292	13.9
48		Chlorobenzene	1.15921	1.13088	2.4
49		1,1,1,2-Tetrachloroethane	0.52593	0.49697	5.5
50		Ethyl Benzene	0.63051	0.67395	6.9
51		o,m-Xylene	0.79619	0.69504	12.7
52		p-Xylene	0.71928	0.72006	0.1
53		Styrene	1.15837	1.14939	0.8
54		Bromoform	0.23071	0.22910	0.7
55	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56		Isopropylbenzene	3.48645	3.72864	6.9
57		trans-1,4-Dichloro-2-butene	0.02892	0.02304	20.4
58		1,1,2,2-Tetrachloroethane	0.44868	0.40806	9.1
59		Bromobenzene	1.58568	1.44475	8.9
60		1,2,3-Trichloropropane	0.29220	0.11084	62.1
61		n-Propylbenzene	0.48860	0.48558	0.6
62		1,3,5-Trimethylbenzene	2.61938	3.00822	14.8
63		2-Chlorotoluene	0.73236	0.76160	4.0
64		4-Chlorotoluene	0.73839	0.76402	3.5
65		t-Butylbenzene	2.58756	2.88620	11.5
66		1,2,4-Trimethylbenzene	2.56215	2.88409	12.6
67		sec-Butylbenzene	4.22555	4.54269	7.5
68		p-Isopropyltoluene	2.87246	3.35904	16.9
69		1,3-Dichlorobenzene	1.56747	1.50873	3.7
70		1,4-Dichlorobenzene	1.51852	1.43057	5.8
71		n-Butylbenzene	2.03280	2.15707	6.1
72		1,2-Dichlorobenzene	1.18051	1.10101	6.7
73		1,2-Dibromo-3-chloropropane	0.09531	0.08344	12.5
74		1,2,4-Trichlorobenzene	0.87256	0.91765	5.2
75		Naphthalene	0.80810	0.69239	14.3
76		Hexachlorobutadiene	0.91731	1.06590	16.2
77		1,2,3-Trichlorobenzene	0.66289	0.67583	2.0

(#) = Out of Range (Advisory for non-CCC)

HERITAGE

VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8260

MASS SPEC FILE: >6481J
ANALYSIS DATE/TIME: 6/25/94 9:35

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	10
Benzene	BDL	uG/L	1
Bromodichloromethane	BDL	uG/L	1
Bromoform	BDL	uG/L	1
Bromomethane	BDL	uG/L	1
Carbon disulfide	BDL	uG/L	1
Carbon tetrachloride	BDL	uG/L	1
Chlorobenzene	BDL	uG/L	1
Chloroethane	BDL	uG/L	1
Chloroform	BDL	uG/L	1
Chloromethane	BDL	uG/L	1
Dibromochloromethane	BDL	uG/L	1
cis-1,3-Dichloropropene	BDL	uG/L	1
1,1-Dichloroethane	BDL	uG/L	1
1,2-Dichloroethane	BDL	uG/L	1
1,1-Dichloroethene	BDL	uG/L	1
1,2-Dichloropropane	BDL	uG/L	1
Ethylbenzene	BDL	uG/L	1
Fluorotrichloromethane	BDL	uG/L	1
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	1
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	1
1,1,2,2-Tetrachloroethane	BDL	uG/L	1
Tetrachloroethene	BDL	uG/L	1
Toluene	BDL	uG/L	1
1,2-Dichloroethene (total)	BDL	uG/L	1
trans-1,3-Dichloropropene	BDL	uG/L	1
1,1,1-Trichloroethane	BDL	uG/L	1
1,1,2-Trichloroethane	BDL	uG/L	1
Trichloroethene	BDL	uG/L	1
Vinyl chloride	BDL	uG/L	1
Xylenes (total)	BDL	uG/L	1

SURROGATE LIST		
Dichloroethane-d4	98	% Rec
Toluene-d8	99	% Rec
Bromofluorobenzene	97	% Rec

( ) = ESTIMATED CONCENTRATION

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 27 Jun 94 6:00 am
Data File: C:\I062794\6500J.D GCMS#9 Misc. CALIBRATION CHECK 6/27/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Sat Jun 25 09:20:08 1994

, = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2		Dichlorodifluoromethane	0.50012	0.38232	23.6
3		Chloromethane	0.38332	0.28823	24.8
4		Vinyl Chloride	0.32516	0.26714	17.8
5		Bromomethane	0.39330	0.35674	9.3
6		Chloroethane	0.19574	0.18097	7.5
7		Trichlorofluoromethane	0.79094	0.77714	1.7
8		Acrolein	0.00327	0.00084#	74.3
9		Acetone	0.02002	0.01519	24.1
10		1,1-Dichloroethene	0.41655	0.35088	15.8
11		Methylene Chloride	0.37032	0.26588	28.2
12		Acrylonitrile	0.01757	0.01599	9.0
13		Carbon Disulfide	1.18635	0.91715	22.7
14		Vinyl Acetate	0.36512	0.24774	32.1
15		trans-1,2-Dichloroethene	0.46335	0.39419	14.9
16		1,1-Dichloroethane	0.77566	0.68119	12.2
17		2-Butanone	0.03840	0.02725	29.0
18		cis-1,2-Dichloroethene	0.45198	0.36798	18.6
19		Chloroform	0.79409	0.69027	13.1
20		Bromochloromethane	0.15972	0.13582	15.0
21		2,2-Dichloropropane	0.59917	0.59857	0.1
22		1,1,1-Trichloroethane	0.72319	0.73059	1.0
23		Iodomethane	0.99715	0.84835	14.9
24	I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25		1,1-Dichloropropene	0.20283	0.19928	1.8
26	S	1,2-Dichloroethane-d4	0.21713	0.19310	11.1
27		Carbon Tetrachloride	0.59804	0.63798	6.7
28		1,2-Dichloroethane	0.27408	0.25275	7.8
29		Benzene	1.12326	0.98511	12.3
30		Trichloroethene	0.49683	0.49929	0.5
31		1,2-Dichloropropane	0.42006	0.37108	11.7
32		Bromodichloromethane	0.61387	0.50296	18.1
33		Dibromomethane	0.24328	0.20695	14.9
34		4-Methyl-2-Pentanone	0.20470	0.09950	51.4
35		2-Chloroethylvinylether	0.08005	0.00735	90.8
36		cis-1,3-Dichloropropene	0.46166	0.41294	10.6
37	S	Toluene-d8	1.04582	1.06701	2.0
38		Toluene	1.26584	1.24411	1.7
39		trans-1,3-Dichloropropene	0.31213	0.27614	11.5
40		1,1,2-Trichloroethane	0.21141	0.18042	14.7
41		1,2-Dibromoethane	0.28445	0.25258	11.2
42	S	4-Bromofluorobenzene	0.62761	0.61274	2.4
43	I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Heritage Laboratory, Indianapolis
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 27 Jun 94 6:00 am
Data File: C:\I062794\6500J.D GCMS#9 Misc. CALIBRATION CHECK 6/27/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Sat Jun 25 09:20:08 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
44		2-Hexanone	0.11569	0.08269	28.5
45		1,3-Dichloropropane	0.44805	0.37778	15.7
46		Tetrachloroethene	0.76995	0.86197	12.0
47		Dibromochloromethane	0.47966	0.42149	12.1
48		Chlorobenzene	1.15921	1.14897	0.9
49		1,1,1,2-Tetrachloroethane	0.52593	0.50541	3.9
50		Ethyl Benzene	0.63051	0.69147	9.7
51		o,m-Xylene	0.79619	0.85724	7.7
52		p-Xylene	0.71928	0.73471	2.1
53		Styrene	1.15837	1.15729	0.1
54		Bromoform	0.23071	0.23334	1.1
55	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56		Isopropylbenzene	3.48645	3.74641	7.5
57		trans-1,4-Dichloro-2-butene	0.02892	0.02294	20.7
58		1,1,2,2-Tetrachloroethane	0.44868	0.41694	7.1
59		Bromobenzene	1.58568	1.41782	10.6
60		1,2,3-Trichloropropane	0.29220	0.10931	62.6
61		n-Propylbenzene	0.48860	0.49854	2.0
62		1,3,5-Trimethylbenzene	2.61938	3.02263	15.4
63		2-Chlorotoluene	0.73236	0.75223	2.7
64		4-Chlorotoluene	0.73839	0.75990	2.9
65		t-Butylbenzene	2.58756	2.89126	11.7
66		1,2,4-Trimethylbenzene	2.56215	2.88468	12.6
67		sec-Butylbenzene	4.22555	4.66957	10.5
68		p-Isopropyltoluene	2.87246	3.42556	19.3
69		1,3-Dichlorobenzene	1.56747	1.52463	2.7
70		1,4-Dichlorobenzene	1.51852	1.46772	3.3
71		n-Butylbenzene	2.03280	2.24275	10.3
72		1,2-Dichlorobenzene	1.18051	1.11226	5.8
73		1,2-Dibromo-3-chloropropane	0.09531	0.08223	13.7
74		1,2,4-Trichlorobenzene	0.87256	0.93094	6.7
75		Naphthalene	0.80810	0.70522	12.7
76		Hexachlorobutadiene	0.91731	1.13329	23.5
77		1,2,3-Trichlorobenzene	0.66289	0.68332	3.1

(#) = Out of Range (Advisory for non-CCC)

VOLATILES ANALYSIS- WATER METHOD BLANK
ANALYSIS METHOD: OLM01

Mass Spec File: >6161C
Analysis Date/Time: 6/29/94 06:56

Compound Name	Result	Limit	Units
Dichlorodifluoromethane	BDL	10	uG/L
Chloromethane	BDL	10	uG/L
Vinyl Chloride	BDL	10	uG/L
Bromomethane	BDL	10	uG/L
Chloroethane	BDL	10	uG/L
Trichlorofluoromethane	BDL	10	uG/L
Diethyl Ether	BDL	10	uG/L
Acrolein	BDL	10	uG/L
Trichlorotrifluoroethane	BDL	10	uG/L
Acetone	BDL	10	uG/L
1,1-Dichloroethene	BDL	10	uG/L
Methylene Chloride	BDL	10	uG/L
Acrylonitrile	BDL	10	uG/L
Methyl-T-Butyl-Ether	BDL	10	uG/L
Vinyl Acetate	BDL	10	uG/L
Carbon Disulfide	BDL	10	uG/L
1,2-Dichloroethene (trans)	BDL	10	uG/L
Diisopropyl Ether	BDL	10	uG/L
1,1-Dichloroethane	BDL	10	uG/L
2-Butanone	BDL	10	uG/L
Ethyl Acetate	BDL	10	uG/L
1,2-Dichloroethene (cis)	BDL	10	uG/L
Chloroform	BDL	10	uG/L
Tetrahydrofuran	BDL	10	uG/L
1,1,1-Trichloroethane	BDL	10	uG/L
Carbon Tetrachloride	BDL	10	uG/L
1,2-Dichloroethane	BDL	10	uG/L
Benzene	BDL	10	uG/L
Trichloroethene	BDL	10	uG/L
1,2-Dichloropropane	BDL	10	uG/L
Bromodichloromethane	BDL	10	uG/L
2-Chloroethylvinylether	BDL	10	uG/L
4-Methyl-2-Pentanone	BDL	10	uG/L
Cis-1,3-Dichloropropene	BDL	10	uG/L
Toluene	BDL	10	uG/L
Trans-1,3-Dichloropropene	BDL	10	uG/L
2-Hexanone	BDL	10	uG/L
1,1,2-Trichloroethane	BDL	10	uG/L
Tetrachloroethene	BDL	10	uG/L
Dibromochloromethane	BDL	10	uG/L

Mass Spec File: >6161C

Chlorobenzene	BDL	10	uG/L
Ethylbenzene	BDL	10	uG/L
Xylene (m,p)	BDL	10	uG/L
Xylene (o)	BDL	10	uG/L
Styrene	BDL	10	uG/L
Bromoform	BDL	10	uG/L
1,1,2,2-Tetrachloroethane	BDL	10	uG/L
1,3-Dichlorobenzene	BDL	10	uG/L
1,4-Dichlorobenzene	BDL	10	uG/L
1,2-Dichlorobenzene	BDL	10	uG/L

Surrogate Recovery

1,2-Dichloroethane-d4	101	% Recovery
Toluene-d8	100	% Recovery
Bromofluorobenzene	96	% Recovery

HERITAGE LABORATORIES, INC
VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8260

MASS SPEC FILE: >6501J
ANALYSIS DATE/TIME: 6/27/94 7:03

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	10
Benzene	BDL	uG/L	1
Bromodichloromethane	BDL	uG/L	1
Bromoform	BDL	uG/L	1
Bromomethane	BDL	uG/L	1
Carbon disulfide	BDL	uG/L	1
Carbon tetrachloride	BDL	uG/L	1
Chlorobenzene	BDL	uG/L	1
Chloroethane	BDL	uG/L	1
Chloroform	BDL	uG/L	1
Chloromethane	BDL	uG/L	1
Dibromochloromethane	BDL	uG/L	1
cis-1,3-Dichloropropene	BDL	uG/L	1
1,1-Dichloroethane	BDL	uG/L	1
1,2-Dichloroethane	BDL	uG/L	1
1,1-Dichloroethene	BDL	uG/L	1
1,2-Dichloropropane	BDL	uG/L	1
Ethylbenzene	BDL	uG/L	1
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	1
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	1
1,1,2,2-Tetrachloroethane	BDL	uG/L	1
Tetrachloroethene	BDL	uG/L	1
Toluene	BDL	uG/L	1
1,2-Dichloroethene (total)	BDL	uG/L	1
trans-1,3-Dichloropropene	BDL	uG/L	1
1,1,1-Trichloroethane	BDL	uG/L	1
1,1,2-Trichloroethane	BDL	uG/L	1
Trichloroethene	BDL	uG/L	1
Vinyl chloride	BDL	uG/L	1
Xylenes (total)	BDL	uG/L	1

SURROGATE LIST		
Dichloroethane-d4	95	% Rec
Toluene-d8	100	% Rec
Bromofluorobenzene	96	% Rec

( ) = ESTIMATED CONCENTRATION

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

QUALITY ASSURANCE REPORT PACKAGE #1778
CONESTOGA-ROVER & ASSOCIATES, INC.

DEBBIE GAGE
CONESTOGA-ROVER & ASSOCIATES, INC.
O'HARE CORPORATE TOWERS ONE
10400 WEST HIGGINS ROAD SUITE 103
ROSEMONT, IL 60018
(708) 299-9933

HERITAGE # A314583,A314585

SAMPLE A314584 (D-061594-WP-105) WAS NOT ANALYZED DUE TO LAB ERROR.

PREPARED BY: HERITAGE ENVIRONMENTAL SERVICES, INC
COMMERCIAL LABORATORY OPERATIONS
7901 WEST MORRIS STREET
INDIANAPOLIS, INDIANA 46231
(317) 243-8304

APPROVED BY: Gary A. Klingler
PROJECT CHEMIST

CRA
CONESTOGA-ROVERS & ASSOCIATES
10400 West Higgins Road – Suite 103
Rosemont, IL 60018 (708)299-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Heritage

REFERENCE NUMBER: 5369

PROJECT NAME: Four County Landfill

SAMPLER'S SIGNATURE:

PRINTED NAME: Karl Johnson

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	VOC	SVOC	Total metals	Diss. metals	CN	NH3	Alk/cl/sp/TSS/TDS/NO3/SO4	TS/Cn/Sulf/PCB/metals			REMARKS
	6/15/94	0800	GW-061594-WP-088	water	4			✓	✓	✓	✓					A314583
	6/16/94	1010	GW-061594-WP-088 *	water	4	✓	✓					✓				
	6/15/94	1810	D-061594-WP-105	Soil	2	✓							✓			584
	6/15/94	1755	D-061594-WP-104 MS/MSD	Soil	2	✓							✓			585
			* VOC, SVOC = MS/MSD, limited sample available *													
			TOTAL NUMBER OF CONTAINERS		12											

RELINQUISHED BY: ①	DATE: 6/16/94 TIME: 1100	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

AIR BILL No. 8933134162

White	Fully Executed Copy
Yellow	Receiving Laboratory Copy
Pink	Shipper Copy
Goldenrod	Sampler Copy

SAMPLE TEAM: K Johnson, L.W. Pochran

RECEIVED FOR LABORATORY BY: S. H. Shaw

DATE: 6/17/94 TIME:

1001(FORMS)-APRIL 29, 93 REV 0-(C)(F-01)

HERITAGE ENVIRONMENTAL SERVICES. INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

METALS CASE NARRATIVE

SAMPLE # A314583

This sample had to be diluted for total Sb, Al and Cd due to matrix interference.

Steven J Endersen 7-11-94

STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

METALS CASE NARRATIVE

SAMPLE # A314585

The matrix spike for this sample was diluted out for Sb. due to matrix interference.

Steven J. Endersen 7-11-94

STEVEN J. ENDERSEN

INORGANIC SECTION LEADER

HERITAGE ENVIRONMENTAL SERVICES. INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

ICP TRACE METALS	SW846-6010A
pH (AQUEOUS)	SW846-9040
FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES	SW846-3005A
MERCURY CVAA	SW846-7470

CONTROL LIMITS (75-125%R, 20%RPD)

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CASE NARRATIVE
GENERAL CHEMISTRIES SECTION

SAMPLE# A314583 and A314585

Sample #A314583 was analyzed using normal procedures with no modifications.

For the Total Organic Carbon analysis of Sample #A314585, the result reflects the water soluble part o the sample.

Barbara A. Shrake

BARBARA A. SHRAKE
LABORATORY SUPERVISOR
7/13/94

HERITAGE ENVIRONMENTAL SERVICES, INC.

7901 West Morris Street
Indianapolis, IN 46231
Phone: 317 243-0811
FAX: 317 486-5085

CYANIDE DISTILLATION	SW846-9010A
CYANIDE, TOTAL (AUTOMATED)	SW846-9012
SULFATE (TURBIDIMETRIC)	SW846-9012
CHLORIDE (COLORIMETRIC, AUTOMATED)	SW846-9251
NITROGEN, NITRATE (COLORIMETRIC AUTOMATED)	EPA 353.2
AMMONIA DISTILLATION	EPA 350.2
AMMONIA NITROGEN	EPA 350.3
ALKALINITY TOTAL	EPA 310.1
TOTAL SUSPENDED SOLIDS	EPA 160.2
DISSOLVED SOLIDS	EPA 160.1

CONTROL LIMITS (75-125% R, 20% RPD)

HERITAGE LABORATORIES, INC.

7301 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317-243-0811
FAX: 317-486-5095

CASE NARRATIVE
GC/MS VOLATILES AND SEMI-VOLATILES
SAMPLES A314583, 585

The criteria for SW-846 Method 8260A were followed for initial and continuing calibration. We were unable to meet the minimum response factor for the compound bromoform. We believe this is due to the 25 mL purge volume necessary to meet the required detection limits.

The MS/MSD control limits for SW-846 8240A and 8270A were taken directly from the methods. Those that appear on the forms included in this package are our laboratory generated advisory limits which are updated quarterly. There are no limits in method 8260A so we used the advisory limits from the Heritage QAP. All data was put in a spreadsheet so we can generate our own limits for use in the future. Acetone was consistently outside the advisory limits. We believe this is a combination of the 25 mL purge volume and the prevalence of acetone in the laboratory.

The recovery for MIBK was out for A314166 MS/MSD. The concentration in the sample exceeded the linear calibration range.

The recovery of pyrene was high in the semi-volatile MS/MSD for A313729. It was also high in the corresponding LCS. No corrective action was required because pyrene was not detected in these samples.

There were no other QC problems encountered in the analysis of these samples.

Anne Bradburn
GC/MS Group Leader

HERITAGE LABORATORIES, INC.

7901 West Morris Street
Indianapolis, IN 46231-3301
Phone: 317/243-0811
FAX: 317-486-5095

GC GROUP CASE NARRATIVE

SAMPLE # A314345-368, A314585

These samples were analyzed using the normal procedures with no modifications.

Lisa Julian

Lisa Julian

GC Groupleader

REVIEWED BY: LJ
DATE 6-28-94

Heritage Laboratory, Indianapolis
Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 25 Jun 94 8:39 am
Data File: C:\I062594\6480J.D GCMS#9 Misc. CALIBRATION CHECK 6/25/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 24 07:16:51 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
1	I	PENTAFLUOROBENZENE	1.00000	1.00000	0.0
2		Dichlorodifluoromethane	0.50012	0.39636	20.7
3		Chloromethane	0.38332	0.29166	23.9
4		Vinyl Chloride	0.32516	0.26615	18.1
5		Bromomethane	0.39330	0.35254	10.4
6		Chloroethane	0.19574	0.15602	20.3
7		Trichlorofluoromethane	0.79094	0.76642	3.1
8		Acrolein	0.00327	0.01687	416.2
9		Acetone	0.02002	0.01420	29.1
10		1,1-Dichloroethene	0.41655	0.34149	18.0
11		Methylene Chloride	0.37032	0.25264	31.8
12		Acrylonitrile	0.01757	0.10566	501.5
13		Carbon Disulfide	1.18635	0.88106	25.7
14		Vinyl Acetate	0.36512	0.24443	33.1
15		trans-1,2-Dichloroethene	0.46335	0.37987	18.0
16		1,1-Dichloroethane	0.77566	0.66630	14.1
17		2-Butanone	0.03840	0.02619	31.8
18		cis-1,2-Dichloroethene	0.45198	0.35993	20.4
19		Chloroform	0.79409	0.68643	13.6
20		Bromochloromethane	0.15972	0.13291	16.8
21		2,2-Dichloropropane	0.59917	0.58648	2.1
22		1,1,1-Trichloroethane	0.72319	0.72087	0.3
23		Iodomethane	0.99715	0.86571	13.2
24	I	1,4-DIFLUOROBENZENE	1.00000	1.00000	0.0
25		1,1-Dichloropropene	0.20283	0.19405	4.3
26	S	1,2-Dichloroethane-d4	0.21713	0.20125	7.3
27		Carbon Tetrachloride	0.59804	0.62573	4.6
28		1,2-Dichloroethane	0.27408	0.25525	6.9
29		Benzene	1.12326	0.95975	14.6
30		Trichloroethene	0.49683	0.49407	0.6
31		1,2-Dichloropropane	0.42006	0.36079	14.1
32		Bromodichloromethane	0.61387	0.49668	19.1
33		Dibromomethane	0.24328	0.20460	15.9
34		4-Methyl-2-Pentanone	0.20470	0.11251	45.0
35		2-Chloroethylvinylether	0.08005	0.02578	67.8
36		cis-1,3-Dichloropropene	0.46166	0.40082	13.2
37	S	Toluene-d8	1.04582	1.07020	2.3
38		Toluene	1.26584	1.19563	5.5
39		trans-1,3-Dichloropropene	0.31213	0.26948	13.7
40		1,1,2-Trichloroethane	0.21141	0.17672	16.4
41		1,2-Dibromoethane	0.28445	0.24703	13.2
42	S	4-Bromofluorobenzene	0.62761	0.61422	2.1
43	I	CHLOROBENZENE-d5	1.00000	1.00000	0.0

Volatile Continuing Calibration Report

Operator ID: REGINA Date Acquired: 25 Jun 94 8:39 am
Data File: C:\I062594\6480J.D GCMS#9 Misc. CALIBRATION CHECK 6/25/94
Method: 8260VOL Title: 8260 VOLATILES
Last Calibration Update: Fri Jun 24 07:16:51 1994

C = CCC Max Dev = 25% P = SPCC Min RF = 0.05
S = Surrogate I = ISTD M = Matrix Spike Compound

cal2 = 5970J.D cal10 = 5972J.D cal25 = 5973J.D
cal50 = 5974J.D cal100 = 5975J.D

PK#		Compound	AvgRRF	CCRRF	%Dev
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45		1,3-Dichloropropane	0.44805	0.37422	16.5
46		Tetrachloroethene	0.76995	0.85014	10.4
47		Dibromochloromethane	0.47966	0.41292	13.9
48		Chlorobenzene	1.15921	1.13088	2.4
49		1,1,1,2-Tetrachloroethane	0.52593	0.49697	5.5
50		Ethyl Benzene	0.63051	0.67395	6.9
51		o,m-Xylene	0.79619	0.69504	12.7
52		p-Xylene	0.71928	0.72006	0.1
53		Styrene	1.15837	1.14939	0.8
54		Bromoform	0.23071	0.22910	0.7
55	I	1,4-Dichlorobenzene-d4	1.00000	1.00000	0.0
56		Isopropylbenzene	3.48645	3.72864	6.9
57		trans-1,4-Dichloro-2-butene	0.02892	0.02304	20.4
58		1,1,2,2-Tetrachloroethane	0.44868	0.40806	9.1
59		Bromobenzene	1.58568	1.44475	8.9
60		1,2,3-Trichloropropane	0.29220	0.11084	62.1
61		n-Propylbenzene	0.48860	0.48558	0.6
62		1,3,5-Trimethylbenzene	2.61938	3.00822	14.8
63		2-Chlorotoluene	0.73236	0.76160	4.0
64		4-Chlorotoluene	0.73839	0.76402	3.5
65		t-Butylbenzene	2.58756	2.88620	11.5
66		1,2,4-Trimethylbenzene	2.56215	2.88409	12.6
67		sec-Butylbenzene	4.22555	4.54269	7.5
68		p-Isopropyltoluene	2.87246	3.35904	16.9
69		1,3-Dichlorobenzene	1.56747	1.50873	3.7
70		1,4-Dichlorobenzene	1.51852	1.43057	5.8
71		n-Butylbenzene	2.03280	2.15707	6.1
72		1,2-Dichlorobenzene	1.18051	1.10101	6.7
73		1,2-Dibromo-3-chloropropane	0.09531	0.08344	12.5
74		1,2,4-Trichlorobenzene	0.87256	0.91765	5.2
75		Naphthalene	0.80810	0.69239	14.3
76		Hexachlorobutadiene	0.91731	1.06590	16.2
77		1,2,3-Trichlorobenzene	0.66289	0.67583	2.0

(#) = Out of Range (Advisory for non-CCC)

QA Report for Sample A314585 Method Blank

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst : L. Dobbins | Analysis Date: 27-JUN-94 | Instrument: GC/ECD | Test: O305.1.0
Reviewer : L.. Julien | Review Date: 28-JUN-94 | File ID: 5158 | Run : R221764
PREP: GC SONICATION EXTRACTION FOR ORGANICS SW846-3550

Identifier	Parameter	True/Sampl	Spike Val	Observed	Units	% Rec	RPD
Q950391	4,4'-DDD			<0.0064	mg/kg		
Q950391	4,4'-DDE			<0.0064	mg/kg		
Q950391	4,4'-DDT			<0.0064	mg/kg		
Q950391	ALDRIN			<0.0032	mg/kg		
Q950391	ALPHA-BHC			<0.0032	mg/kg		
Q950391	ALPHA-CHLORDANE			<0.032	mg/kg		
Q950391	BETA-BHC			<0.0032	mg/kg		
Q950391	DELTA-BHC			<0.0032	mg/kg		
Q950391	DIELDRIN			<0.0064	mg/kg		
Q950391	ENDOSULFAN I			<0.0032	mg/kg		
Q950391	ENDOSULFAN II			<0.0064	mg/kg		
Q950391	ENDOSULFAN SULFATE			<0.0064	mg/kg		
Q950391	ENDRIN			<0.0064	mg/kg		
Q950391	ENDRIN KETONE			<0.0064	mg/kg		
Q950391	GAMMA-BHC (LINDANE)			<0.0032	mg/kg		
Q950391	GAMMA-CHLORDANE			<0.032	mg/kg		
Q950391	HEPTACHLOR			<0.0032	mg/kg		
Q950391	HEPTACHLOR EPOXIDE			<0.0032	mg/kg		
Q950391	METHOXYCHLOR			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1016			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1221			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1232			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1242			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1248			<0.032	mg/kg		
Q950391	PCB AROCHLOR 1254			<0.064	mg/kg		
Q950391	PCB AROCHLOR 1260			<0.064	mg/kg		
Q950391	TOXAPHENE			<0.064	mg/kg		

VOLATILES ANALYSIS-WATER METHOD BLANK

ANALYSIS METHOD: SW846-8260

MASS SPEC FILE: >6481J
ANALYSIS DATE/TIME: 6/25/94 9:35

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/L	10
Benzene	BDL	uG/L	1
Bromodichloromethane	BDL	uG/L	1
Bromoform	BDL	uG/L	1
Bromomethane	BDL	uG/L	1
Carbon disulfide	BDL	uG/L	1
Carbon tetrachloride	BDL	uG/L	1
Chlorobenzene	BDL	uG/L	1
Chloroethane	BDL	uG/L	1
Chloroform	BDL	uG/L	1
Chloromethane	BDL	uG/L	1
Dibromochloromethane	BDL	uG/L	1
cis-1,3-Dichloropropene	BDL	uG/L	1
1,1-Dichloroethane	BDL	uG/L	1
1,2-Dichloroethane	BDL	uG/L	1
1,1-Dichloroethene	BDL	uG/L	1
1,2-Dichloropropane	BDL	uG/L	1
Ethylbenzene	BDL	uG/L	1
Fluorotrichloromethane	BDL	uG/L	1
2-Hexanone	BDL	uG/L	10
Methylene chloride	BDL	uG/L	1
Methyl ethyl ketone	BDL	uG/L	10
4-Methyl-2-pentanone	BDL	uG/L	10
Styrene	BDL	uG/L	1
1,1,2,2-Tetrachloroethane	BDL	uG/L	1
Tetrachloroethene	BDL	uG/L	1
Toluene	BDL	uG/L	1
1,2-Dichloroethene (total)	BDL	uG/L	1
trans-1,3-Dichloropropene	BDL	uG/L	1
1,1,1-Trichloroethane	BDL	uG/L	1
1,1,2-Trichloroethane	BDL	uG/L	1
Trichloroethene	BDL	uG/L	1
Vinyl chloride	BDL	uG/L	1
Xylenes (total)	BDL	uG/L	1

SURROGATE LIST		
Dichloroethane-d4	98	% Rec
Toluene-d8	99	% Rec
Bromofluorobenzene	97	% Rec

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0252B Inj Time : 940705 09:33 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
N-Nitrosodimethylamine	.94857	.86125	9.20			(Conc=50.00)
Pyridine	1.46811	1.64984	12.38			
2-Picoline	1.27932	1.43876	12.46			
2-Fluorophenol	1.31401	1.35715	3.28			
Aniline	1.78257	1.76314	1.09			
Phenol-d6	1.66829	1.73068	3.74			
Phenol	1.95813	1.95401	.21	*		
bis(2-chloroethyl)ether	1.70737	1.58922	6.92			
2-Chlorophenol-d4	1.47723	1.35954	7.97			
2-Chlorophenol	1.57108	1.49036	5.14			
1,3-Dichlorobenzene	1.50504	1.47804	1.79			
1,4-Dichlorobenzene	1.58563	1.55529	1.91	*		
Benzyl alcohol	.95166	.87614	7.94			
1,2-Dichlorobenzene	1.55410	1.50722	3.02			
1,2-Dichlorobenzene-d4	1.67651	1.57993	5.76			
2-Methylphenol	1.27838	1.18201	7.54			
bis(2-chloroisopropyl)ether	.92113	.63557	31.00			
4-Methylphenol	1.38032	1.32743	3.83			
N-Nitroso-di-n-propylamine	.98656	.85485	13.35		**	
Hexachloroethane	.61676	.54971	10.87			
Nitrobenzene-d5	.37671	.34960	7.20			
Nitrobenzene	.37160	.44850	20.69			
Isophorone	.70429	.61908	12.10			
2-Nitrophenol	.21146	.18767	11.25	*		
2,4-Dimethylphenol	.27784	.25701	7.50			
Benzoic acid	.13903	.18383	32.22			
bis(2-Chloroethoxy)methane	.49618	.42214	14.92			
2,4-Dichlorophenol	.29435	.29293	.48	*		
1,2,4-Trichlorobenzene	.30872	.28947	6.24			
Naphthalene	1.06413	1.01983	4.16			
4-Chloroaniline	.34812	.36481	4.79			
Hexachlorobutadiene	.15188	.14728	3.03	*		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0252B Inj Time : 940705 09:33 ID File : IDYUCK::QT

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:16

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
4-Chloro-3-methylphenol	.25559	.25024	2.09	*	
2-Methylnaphthalene	.87434	.82657	5.46		
Toluenediamine	-	-	-		
1,2,4,5-Tetrachlorobenzene	.66715	.61446	7.90		
Hexachlorocyclopentadiene	.35979	.19249	46.50		**
2,4,6-Trichlorophenol	.44292	.37175	16.07	*	
2,4,5-Trichlorophenol	.41194	.37299	9.46		
2-Chloronaphthalene	1.34710	1.21747	9.62		
2-Fluorobiphenyl	1.40674	1.27531	9.34		
2-Nitroaniline	.34385	.30312	11.84		
1,3-Dinitrobenzene	.24390	.22599	7.35		
Dimethylphthalate	1.23291	1.17881	4.39		
Acenaphthylene	2.07334	1.83077	11.70		
2,6-Dinitrotoluene	.27075	.29617	9.39		
3-Nitroaniline	.31002	.35895	15.78		
Acenaphthene	1.24717	1.16447	6.63	*	
2,4-Dinitrophenol	.13411	.13878	3.48		**
4-Nitrophenol	.08794	.09934	12.97		**
Dibenzofuran	1.65910	1.46013	11.99		
2,4-Dinitrotoluene	.35491	.30387	14.38		
2,3,4,6-Tetrachlorophenol	.21267	.22678	6.63		
Diethylphthalate	1.14545	1.01672	11.24		
4-Chlorophenyl-phenylether	.59122	.51928	12.17		
Fluorene	1.22588	1.10011	10.26		
4-Nitroaniline	.26026	.25311	2.75		
2,4,6-Tribromophenol	.12297	.11505	6.44		
4,6-Dinitro-2-methylphenol	.12312	.11028	10.43		
N-Nitrosodiphenylamine (1)	.50719	.46956	7.42	*	
4-Bromophenyl-phenylether	.25338	.22268	12.11		
Hexachlorobenzene	.31612	.26684	15.59		
Pentachlorophenol	.11075	.12802	15.60	*	
Phenanthrene	1.15073	1.12777	1.99		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
Semi-Volatile Continuing Calibration Check

File ID : >0252B Inj Time : 940705 09:33 ID File : IDYUCK::0T

Analyst : GAYE Calibration File : CBYUCK::B4

Mass Spec ID : GCMS#2 Last Calibration File Update : 940622 14:15

Calibration
Data Files: 20 uG/mL->0128B 50 uG/mL->0127B 80 uG/mL->0129B
120 uG/mL->0130B 160 uG/mL->0131B

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Anthracene	1.07983	.97349	9.85			
Carbazole	1.85331	1.89436	2.21			
Di-n-butylphthalate	1.22060	1.12828	7.56			
Fluoranthene	.81734	.90668	10.93	*		
alpha-BHC	.13821	.11589	16.14			
beta-BHC	.08573	.08494	.92			
gamma-BHC (Lindane)	.10054	.08366	16.79			
1,2-Diphenylhydrazine	1.18877	.90241	24.09			
delta-BHC	.08271	.07650	7.51			
Heptachlor	.11519	.09538	17.20			
Aldrin	.07806	.07044	9.76			
Heptachlor epoxide	.04521	.04289	5.14			
Benzidine	.29866	.18945	36.57			(Conc=50.00)
Pyrene	1.82819	1.50608	17.62			
Terphenyl-d14	1.24424	1.06028	14.78			
Butylbenzylphthalate	.67370	.62107	7.81			
3,3'-Dichlorobenzidine	.31154	.32244	3.50			
Benzo(a)anthracene	1.32474	1.24003	6.39			
Chrysene	.97421	.88661	8.99			
bis(2-Ethylhexyl)phthalate	.85604	.82158	4.03			
alpha-Endosulfan	.04456	.03309	25.73			
Dieldrin	.38804	.32579	16.04			
p,p'-DDE	.33230	.30395	8.53			
Endrin	.07792	.06612	15.15			
beta-Endosulfan	.03932	.03632	7.63			
p,p'-DDD	.49588	.44797	9.66			
Endrin aldehyde	-	-	-			
Endosulfan sulfate	.08158	.07469	8.45			
p,p'-DDT	.40530	.38695	4.53			
Di-n-octylphthalate	2.41980	2.82501	16.75	*		
Benzo(b)fluoranthene	1.72469	1.93768	12.35			
Benzo(k)fluoranthene	1.30765	1.38763	6.12			

RF - Response Factor from daily standard file at 50.00 UG/KG
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 07/05/94

Contractor:

Time: 09:33

Contract No:

Laboratory ID: >0252B

Instrument ID: GCMS#2

Initial Calibration Date: 06/22/94

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 30%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)pyrene	1.34647	1.36692	1.52	*	
Indeno(1,2,3-cd)pyrene	.87735	.68334	22.11		
Dibenz(a,h)anthracene	.79481	.67331	15.29		
Benzo(g,h,i)perylene	.87112	.76625	12.04		

RF - Response Factor from daily standard file at 50.00 UG/KG

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE LABORATORIES, INC
SEMI-VOLATILES ANALYSIS-WATER METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7736H SVL# 778-040

ANALYSIS DATE/TIME: 6/24/94 03:44

PREP DATE: 6/21/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/L	10
Acenapthylene	BDL	uG/L	10
Anthracene	BDL	uG/L	10
Benz(a)anthracene	BDL	uG/L	10
Benzo(a)pyrene	BDL	uG/L	10
Benzo(b)fluoranthene	BDL	uG/L	10
Benzo(ghi)perylene	BDL	uG/L	10
Benzo(k)fluoranthene	BDL	uG/L	10
Benzylbutylphthalate	BDL	uG/L	10
Bis(2-chloroethoxy)methane	BDL	uG/L	10
Bis(2-chloroethyl)ether	BDL	uG/L	10
Bis(2-chloroisopropyl)ether	BDL	uG/L	10
Bis(2-ethylhexyl)phthalate	BDL	uG/L	10
4-Bromophenylphenylether	BDL	uG/L	10
Carbazole	BDL	uG/L	10
4-Chloroaniline	BDL	uG/L	10
2-Chloronaphthalene	BDL	uG/L	10
4-Chlorophenylphenylether	BDL	uG/L	10
Chrysene	BDL	uG/L	10
Dibenz(a,h)anthracene	BDL	uG/L	10
Dibenzofuran	BDL	uG/L	10
1,2-Dichlorobenzene	BDL	uG/L	10
1,3-Dichlorobenzene	BDL	uG/L	10
1,4-Dichlorobenzene	BDL	uG/L	10
3,3' -Dichlorobenzidine	BDL	uG/L	20
Diethylphthalate	BDL	uG/L	10
Dimethylphthalate	BDL	uG/L	10
Di-n-butylphthalate	BDL	uG/L	10
2,4-Dinitrotoluene	BDL	uG/L	10
2,6-Dinitrotoluene	BDL	uG/L	10
Di-n-octylphthalate	BDL	uG/L	10
Fluoranthene	BDL	uG/L	10
Fluorene	BDL	uG/L	10
Hexachlorobenzene	BDL	uG/L	10
Hexachlorobutadiene	BDL	uG/L	10
Hexachlorocyclopentadiene	BDL	uG/L	10
Hexachloroethane	BDL	uG/L	10
Indeno(1,2,3-cd)pyrene	BDL	uG/L	10
Isophorone	BDL	uG/L	10
2-Methylnaphthalene	BDL	uG/L	10
Naphthalene	BDL	uG/L	10

MASS SPEC FILE: >7736H

2-Nitroaniline.....	BDL	uG/L	50
3-Nitroaniline.....	BDL	uG/L	50
4-Nitroaniline.....	BDL	uG/L	50
Nitrobenzene.....	BDL	uG/L	10
N-Nitroso-diphenylamine.....	BDL	uG/L	10
N-Nitroso-di-n-propylamine.....	BDL	uG/L	10
Phenanthrene.....	BDL	uG/L	10
Pyrene.....	BDL	uG/L	10
Tetrachlorobenzenes.....	BDL	uG/L	10
1,2,4-Trichlorobenzene.....	BDL	uG/L	10
4-Chloro-3-methylphenol.....	BDL	uG/L	10
2-Chlorophenol.....	BDL	uG/L	10
2,4-Dichlorophenol.....	BDL	uG/L	10
2,4-Dimethylphenol.....	BDL	uG/L	10
4,6-Dinitro-2-methylphenol.....	BDL	uG/L	50
2,4-Dinitrophenol.....	BDL	uG/L	50
2-Methylphenol.....	BDL	uG/L	10
4-Methylphenol.....	BDL	uG/L	10
2-Nitrophenol.....	BDL	uG/L	10
4-Nitrophenol.....	BDL	uG/L	50
Pentachlorophenol.....	BDL	uG/L	50
Phenol.....	BDL	uG/L	10
Tetrachlorophenol.....	BDL	uG/L	10
2,4,5-Trichlorophenol.....	BDL	uG/L	50
2,4,6-Trichlorophenol.....	BDL	uG/L	10

SURROGATE LIST			spike conc
2-Fluorophenol.....	53	% Rec	100
Phenol-d5.....	43	% Rec	100
Nitrobenzene-d5.....	84	% Rec	50
2-Fluorobiphenyl.....	86	% Rec	50
2,4,6-Tribromophenol.....	60	% Rec	100
Terphenyl-d14.....	101	% Rec	50

( ) = ESTIMATED CONCENTRATION

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >6120C Inj Time : 940627 09:18 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Acrolein	.06930	.01350	80.51			(Conc=300.00)
Acrylonitrile	.39274	.22486	42.75			(Conc=300.00)
Chloromethane	1.19881	1.11715	6.81		**	
Bromomethane	1.20277	1.39381	15.88			
Vinyl Chloride	.96821	1.11815	15.49	*		
Dichlorodifluoromethane	1.48519	1.82972	23.20			
Chloroethane	.71495	.85151	19.10			
Methylene Chloride	1.49886	1.58883	6.00			
Acetone	.77561	.86525	11.56			
Carbon Disulfide	2.50489	2.16278	13.66			
Trichlorofluoromethane	3.57785	4.39963	22.97			
1,1-Dichloroethene	1.05652	1.14553	8.42	*		
1,1-Dichloroethane	2.66445	2.88049	8.11		**	
[Tetrahydrofuran]	.53124	.47247	11.06			(Conc=125.00)
1,2-Dichloroethene (total)	1.00217	.97880	2.33			(Conc=100.00)
Diethyl Ether	.63148	.44506	29.52			
Chloroform	3.40786	3.20984	5.81	*		
Trichloro-trifluoroethane	1.51530	1.32511	12.55			
1,2-Dichloroethane-d4	2.09459	1.96919	5.99			
2-Butanone	.93293	.91957	1.43			
1,2-Dichloroethane	2.52312	2.45947	2.52			
Methyl-t-butyl ether	1.00690	1.07206	6.47			
1,1,1-Trichloroethane	.80579	.89524	11.10			
Carbon Tetrachloride	.82349	.94478	14.73			
Ethyl Acetate	.81490	.78238	3.99			
Vinyl Acetate	.54635	.52566	3.79			
Bromodichloromethane	1.26165	1.36201	7.95			
1,2-Dichloropropane	.47484	.50014	5.33	*		
cis-1,3-Dichloropropene	.90845	1.00462	10.59			
Trichloroethene	.50286	.50788	1.00			
Diisopropyl Ether	1.34489	1.28017	4.81			
2-Chloroethyl Vinyl Ether	.24845	.28342	14.07			

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Heritage Laboratories, Indianapolis
SW846-8240 Volatile Continuing Calibration Check

File ID : >6120C Inj Time : 940627 09:18 ID File : CLPVOL::A2

Analyst : BETH Calibration File : CLPCAL::A2

Mass Spec ID : GCMS#3 Last Calibration File Update : 940525 14:32

Calibration
Data Files: 20 uG/L ->5565C 50 uG/L ->5566C
100 uG/L ->5567C 150 uG/L ->5568C 200 uG/L->5569C

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Dibromochloromethane	1.32316	1.52439	15.21			
1,1,2-Trichloroethane	.60604	.66315	9.42			
Benzene	.85252	.90508	6.17	*		
trans-1,3-Dichloropropene	.86673	1.01207	16.77			
Bromoform	1.40695	1.53622	9.19		**	
4-Methyl-2-Pentanone	1.05398	1.16892	10.90			
2-Hexanone	.88764	.92667	4.40			
Tetrachloroethene	.46761	.51607	10.36			
1,1,2,2-Tetrachloroethane	1.10359	1.42349	28.99		**	
Toluene-d8	.91651	.92889	1.35			
Toluene	.60528	.61538	1.67	*		
Chlorobenzene	1.01544	1.12548	10.84		**	
Ethylbenzene	.42381	.45844	8.17	*		
Bromofluorobenzene	1.49381	1.82850	22.40			
Styrene	1.12330	1.30520	16.19			
m-Xylene	.58317	.67591	15.90			
o,p-Xylene	.57853	.64949	12.27			(Conc=100.00)
m-Dichlorobenzene	1.53175	1.94287	26.84			
o,p-Dichlorobenzene	1.45240	1.90597	31.23			(Conc=100.00)

RF - Response Factor from daily standard file at 50.00 ug/L
RF - Average Response Factor from Initial Calibration Form VI
%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

HERITAGE LABORATORIES, INC
SEMI-VOLATILES ANALYSIS-SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8270

MASS SPEC FILE: >7071F SVL# 786-754

ANALYSIS DATE/TIME: 7/12/94 06:04

PREP DATE: 6/22/94

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acenaphthene	BDL	uG/KG	330
Acenapthylene	BDL	uG/KG	330
Anthracene	BDL	uG/KG	330
Benz(a)anthracene	BDL	uG/KG	330
Benzo(a)pyrene	BDL	uG/KG	330
Benzo(b)fluoranthene	BDL	uG/KG	330
Benzo(ghi)perylene	BDL	uG/KG	330
Benzo(k)fluoranthene	BDL	uG/KG	330
Benzyl Alcohol	BDL	uG/KG	330
Benzylbutylphthalate	BDL	uG/KG	330
Bis(2-chloroethoxy)methane	BDL	uG/KG	330
Bis(2-chloroethyl)ether	BDL	uG/KG	330
Bis(2-chloroisopropyl)ether	BDL	uG/KG	330
Bis(2-ethylhexyl)phthalate	BDL	uG/KG	330
4-Bromophenylphenylether	BDL	uG/KG	330
Carbazole	BDL	uG/KG	330
4-Chloroaniline	BDL	uG/KG	330
2-Chloronaphthalene	BDL	uG/KG	330
4-Chlorophenylphenylether	BDL	uG/KG	330
Chrysene	BDL	uG/KG	330
Dibenz(a,h)anthracene	BDL	uG/KG	330
Dibenzofuran	BDL	uG/KG	330
1,2-Dichlorobenzene	BDL	uG/KG	330
1,3-Dichlorobenzene	BDL	uG/KG	330
1,4-Dichlorobenzene	BDL	uG/KG	330
3,3' -Dichlorobenzidine	BDL	uG/KG	660
Diethylphthalate	BDL	uG/KG	330
Dimethylphthalate	BDL	uG/KG	330
Di-n-butylphthalate	BDL	uG/KG	330
Dinitrobenzenes	BDL	uG/KG	1600
2,4-Dinitrotoluene	BDL	uG/KG	330
2,6-Dinitrotoluene	BDL	uG/KG	330
Di-n-octylphthalate	BDL	uG/KG	330
Fluoranthene	BDL	uG/KG	330
Fluorene	BDL	uG/KG	330
Hexachlorobenzene	BDL	uG/KG	330
Hexachlorobutadiene	BDL	uG/KG	330
Hexachlorocyclopentadiene	BDL	uG/KG	330
Hexachloroethane	BDL	uG/KG	330
Indeno(1,2,3-cd)pyrene	BDL	uG/KG	330
Isophorone	BDL	uG/KG	330
2-Methylnaphthalene	BDL	uG/KG	330
Naphthalene	BDL	uG/KG	330

MASS SPEC FILE: >7071F

2-Nitroaniline.....	BDL	uG/KG	1600
3-Nitroaniline.....	BDL	uG/KG	1600
4-Nitroaniline.....	BDL	uG/KG	1600
Nitrobenzene.....	BDL	uG/KG	330
N-Nitroso-diphenylamine.....	BDL	uG/KG	330
N-Nitroso-di-n-propylamine.....	BDL	uG/KG	330
Phenanthrene.....	BDL	uG/KG	330
2-Picoline.....	BDL	uG/KG	1600
Pyrene.....	BDL	uG/KG	330
Pyridine.....	BDL	uG/KG	1600
Tetrachlorobenzenes.....	BDL	uG/KG	330
Toluenediamine.....	BDL	uG/KG	1600
1,2,4-Trichlorobenzene.....	BDL	uG/KG	330
Benzoic Acid.....	BDL	uG/KG	1600
4-Chloro-3-methylphenol.....	BDL	uG/KG	330
2-Chlorophenol.....	BDL	uG/KG	330
2,4-Dichlorophenol.....	BDL	uG/KG	330
2,4-Dimethylphenol.....	BDL	uG/KG	330
4,6-Dinitro-2-methylphenol.....	BDL	uG/KG	1600
2,4-Dinitrophenol.....	BDL	uG/KG	1600
2-Methylphenol.....	BDL	uG/KG	330
4-Methylphenol.....	BDL	uG/KG	330
2-Nitrophenol.....	BDL	uG/KG	330
4-Nitrophenol.....	BDL	uG/KG	1600
Pentachlorophenol.....	BDL	uG/KG	1600
Phenol.....	BDL	uG/KG	330
Tetrachlorophenol.....	BDL	uG/KG	330
2,4,5-Trichlorophenol.....	BDL	uG/KG	1600
2,4,6-Trichlorophenol.....	BDL	uG/KG	330

SURROGATE LIST			spike conc
2-Fluorophenol.....	74	% Rec	3300
Phenol-d5.....	79	% Rec	3300
Nitrobenzene-d5.....	82	% Rec	1600
2-Fluorobiphenyl.....	92	% Rec	1600
2,4,6-Tribromophenol.....	55	% Rec	3300
Terphenyl-d14.....	107	% Rec	1600

( ) = ESTIMATED CONCENTRATION

HERITAGE
VOLATILES ANALYSIS-LOW SOIL METHOD BLANK
ANALYSIS METHOD: SW846-8240

MASS SPEC FILE: >6121C

ANALYSIS DATE/TIME: 6/27/94 10:32

TARGET COMPOUND LIST	RESULT	UNITS	DET. LIMIT
Acetone	BDL	uG/KG	20
Acrolein	BDL	uG/KG	50
Acrylonitrile	BDL	uG/KG	70
Benzene	BDL	uG/KG	5
Bromodichloromethane	BDL	uG/KG	5
Bromoform	BDL	uG/KG	5
Bromomethane	BDL	uG/KG	10
Carbon disulfide	BDL	uG/KG	5
Carbon tetrachloride	BDL	uG/KG	5
Chlorobenzene	BDL	uG/KG	5
Chloroethane	BDL	uG/KG	10
Chloroform	BDL	uG/KG	5
Chloromethane	BDL	uG/KG	10
Dibromochloromethane	BDL	uG/KG	5
cis-1,3-Dichloropropene	BDL	uG/KG	5
Dichlorodifluoromethane	BDL	uG/KG	5
1,1-Dichloroethane	BDL	uG/KG	5
1,2-Dichloroethane	BDL	uG/KG	5
1,1-Dichloroethene	BDL	uG/KG	5
1,2-Dichloropropane	BDL	uG/KG	5
Ethylbenzene	BDL	uG/KG	5
Fluorotrichloromethane	BDL	uG/KG	5
2-Hexanone	BDL	uG/KG	10
Methylene chloride	BDL	uG/KG	5
Methyl ethyl ketone	BDL	uG/KG	10
4-Methyl-2-pentanone	BDL	uG/KG	10
Styrene	BDL	uG/KG	5
1,1,2,2-Tetrachloroethane	BDL	uG/KG	5
Tetrachloroethene	BDL	uG/KG	5
Tetrahydrofuran	BDL	uG/KG	25
Toluene	BDL	uG/KG	5
1,2-Dichloroethene (total)	BDL	uG/KG	5
trans-1,3-Dichloropropene	BDL	uG/KG	5
1,1,1-Trichloroethane	BDL	uG/KG	5
1,1,2-Trichloroethane	BDL	uG/KG	5
Trichloroethene	BDL	uG/KG	5
Vinyl acetate	BDL	uG/KG	10
Vinyl chloride	BDL	uG/KG	10
Xylenes (total)	BDL	uG/KG	5

SURROGATE LIST		
Dichloroethane-d4	84	% Rec
Toluene-d8	99	% Rec
Bromofluorobenzene	98	% Rec

( ) = ESTIMATED CONCENTRATION