# Section III.B
# Outfall 00A

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B Outfall Information

nplete a separate Section III.B. - Outfall Information (pages 26-31) for each outfall at the facility. Make copies of this blank section .. the application for additional outfalls as necessary.

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00A |

1. OUTFALL INFORMATION (see page 25 for instruction on completion of this page)

| | | | | | |
|---|---|---|---|---|---|
| A | Watershed: Lower St Joseph | | | | |
| B | Receiving Water: Lake Michigan | | | | |
| C | County: Berrien | | Township: Lake | | |
| D. | ¼, ¼: SW | ¼: NW | Section: 06 | Town: 06S | Range: 19W |
| E. | Latitude: 41 58' 30" | | Longitude: 86 34' 30" | | |

F. Type of Wastewater Discharged (Check all that apply to this outfall)

- ☐ Contact Cooling
- ☐ Sanitary Wastewater
- ☐ Groundwater Cleanup
- ☐ Storm Water (regulated)
- ☐ Noncontact Cooling
- ☒ Process Wastewater
- ☐ Hydrostatic Pressure Test
- ☐ Storm Water (not regulated)
- ☐ Storm water subject to effluent guidelines (indicate under which category) ____
- ☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" in appendix) ____

J. What is the maximum Facility Design Flow Rate: 1 MGD

G. What is the maximum discharge flow authorized for this outfall
Seasonal Dischargers ____ MGY Continue with Item H.
Continuous Dischargers 1 MGD Continue with Item I.

H Seasonal Discharge

List the discharge periods (by month) and the volume discharged in the space provided below.

| From | Through | Discharge Volume | Annual Total |
|---|---|---|---|
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |

I Continuous Discharge

How often is there a discharge from this outfall (on the average)? 24 Hours/Day 365 Days/Year

**Batch dischargers must provide the following additional information:**

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate ____ Number of batches discharged per day ____

| | Minimum | Average | Maximum |
|---|---|---|---|
| Batch Volume (gallons) | | | |
| Batch Duration (minutes) | | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00A |

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility. Page 7 of the appendix contains an abbreviated list of various industries and the types of information each shall report in this application. For assistance call the Permits Section. All industries shall provide the name of each process and the SIC or the NAICS code for the process. If the wastestream is not regulated under federal categorical standards, the applicant shall report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information see page ii, item 8.

PROCESS INFORMATION

A Name of the process contributing to the discharge: Steam Generator Blowdown

B. SIC or NAICS code. 4911

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported) Steam Generator Blowdown. 1 MGD maximum flow 2247 MWE total plant electrical generation.

PROCESS INFORMATION

A Name of the process contributing to the discharge: _____

B. SIC or NAICS code. _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code. _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported).

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported).

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

## STRUCTIONS FOR COMPLETING SECTION III, ITEM B.3:

In accordance with 40 CFR 122.21, all applicants must report $CBOD_5$, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH. The applicant may, however, request that reporting of data for one or more of these required parameters be waived Such request must be supported by adequate rationale. The request shall be included as an attachment to this application.

Report available discharge data for the parameters listed. Actual data shall be provided for existing discharges and expected or estimated data provided for proposed discharges Please include an explanation if "Pollution Prevention" is expected to provide reduction of pollutants. See Page 8 of the appendix for a list of specific parameters for which data must be provided for specific types of discharges (e g., noncontact cooling waters, gasoline groundwater cleanups, etc.). For assistance in determining the appropriate parameters to report, call the Permits Section.

If data are available for other parameters not listed in Section III.B.3 , the applicant shall report these data in the blank spaces provided or attach the information to this application on 8½" x 11" paper.

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows: µg/l = micrograms per liter, mg/l = milligrams per liter, °F = degrees Fahrenheit, °C = degrees Celsius. **See page ii number 5 for analytical requirements.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total $BOD_5$, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use **24-hour composite samples** unless other frequency-sample type analyses are available

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the district office, on a separate sheet attached to the application form, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled See pages ii and iii for sampling definitions, including "maximum daily concentration", and "maximum monthly concentration".

REPORTING OF INTAKE DATA

Applicants are required to report intake water data when they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters remaining after treatment which is not removed by the treatment system. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122.45(g)). To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information shall be submitted for each parameter:

a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.

b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed

c) When applicable (for example, when the pollutant represents a class of compounds, e g., $BOD_5$, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge. Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants.

**Note:** Applicants for groundwater remediation discharges should also report the intake characteristics of contaminated groundwater.

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

*"Better Service for a Better Environment"*

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www deq state mi us

RUSSELL J. HARDING, Director

REPLY TO:

PLAINWELL DISTRICT OFFICE
1342 SR 89 W STE B
PLAINWELL MI 49080-1915

January 28, 1999

Mr. John P. Carlson
Environmental Compliance Manager
Cook Nuclear Plant
One Cook Place
Bridgman, Michigan 49106

Dear Mr. Carlson:

SUBJECT: Application for Renewal of NPDES Permit No. MI0005827

We have reviewed the information provided in your letter of January 25, 1999. In that letter you request that representative outfalls be used to characterize effluent characteristics for similar outfalls. We approve your request as follows:

1. Effluent from Outfall 001 will be considered representative of outfalls 001, 002, and 003.

2. Effluent from Outfall 00B will be considered representative of outfalls 00A and 00B.

Please feel free to contact me if you have any questions.

Sincerely,

Gregory A. Danneffel
Plainwell District Office
Surface Water Quality Division
616-692-6968

cc: Mr. Blair Zordell, Cook Nuclear Plant
Mr. Dan Dell, Permits Section, SWQD
Ms. Sylvia Heaton, GLEAS, SWQD

American Electric Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
616 465 5901

AEP
AMERICAN ELECTRIC POWER

Mr. Fred Morley
Surface Water Quality Division
Michigan Department of Environmental Quality
1342 SR89 West Suite B
Plainwell, MI 49080

January 25, 1999

Dear Mr. Morley:

Subject: NPDES Permit No. MI0005827 Application

We are currently preparing the Wastewater Discharge Permit Application to renew our current NPDES operating permit. As noted in Section III - Industrial and Commercial Wastewater, Part B. Outfall Information Item 6, paragraph 5 contains instructions to request permission to use a single sample for similar outfalls for application purposes.

We request that Outfall 001 be used as a representative sample for Outfalls 002 (Unit Two Noncontact Cooling Water) and Outfall 003 (De-icing Mode) for application use only. Outfalls 002 and 003 are substantially identical to Outfall 001. The source of these Outfalls is Lake Michigan; similar waste streams enter each Outfall prior to discharge.

In addition, we are requesting Outfall 00B (Unit Two Steam Generator Blowdown) to be used as a representative sample for Outfall 00A (Unit One Steam Generator Blowdown). Outfall 00A and Outfall 00B are substantially identical discharges, with the exception that Outfall 00A originates from the Unit One Steam Generators, and Outfall 00B originates from the Unit Two Steam Generators.

If you have any questions, please contact me at (616) 465-5901, ext. 1153.

Sincerely,

John P. Carlson
Environmental Compliance Manager

/tlm

c: Greg Danneffel - MDEQ Plainwell
Sylvia Heaton - MDEQ Lansing

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

D. E. Cooper
Plant Manager

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00A |

4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all the pollutants identified in Table 3. Existing primary industries must also provide the results of at least one effluent analysis for any other chemical listed in Table 2 known or believed to be present in facility effluent.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New primary industries that propose to discharge process wastewater must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

5 DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T); 2- (2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent, must submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6. All effluent analyses for dioxin and furan congeners must be conducted using EPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any dioxin and furan congener listed in Table 6

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent must provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6.

6 OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries, or existing primary industries that discharge non-process wastewater, must submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in facility effluent.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3.

New secondary industries, or new primary industries that propose to discharge non-process wastewater, must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, must provide the results of at least one analyses for any chemical listed in Table 4 known or believed to be present in facility effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in facility effluent. In addition, submit the results of any effluent analysis performed within the last 5 years for any chemical listed in Tables 4 and 5.

New industries, regardless of discharge type, must provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be in facility effluent.

8 INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, must provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in facility effluent that have not been previously identified in this application. Quantitative effluent data that are less than 5 years old for these chemicals must be reported.

**NOTE:** All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on page 31. To submit additional information see page ii, item 8 If the effluent concentrations are estimated, place an E in the "Analytical Method" column. The following fields must be completed for each data row: Parameter, CAS No , Concentration(s), Sample Type, Analytical Method, Quantification Level and Detection Level See page ii, number 5 for analytical test requirements

Belmonte Park Environmental Laboratories

AMERICAN ELECTRIC POWER (AEP)
1 COOK PLACE
BRIDGMAN, MICHIGAN 49106

Attn: BLAIR ZORDELL

Purchase Order: 4307976
Invoice Number:

Order #: 99-02-232
Date: 03/16/99 09:23
Work ID: OUTFALL 00H - 00B (FAX)
Date Received: 02/03/99
Date Completed: 03/16/99

Client Code: AEP_4

ND= NONE DETECTED
OHIO CERT.# 12345

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | |
|---|---|---|
| 01 | OUTFALL 00H | 02/03/99 |
| 02 | OUTFALL 00H | 02/03/99 |
| 03 | OUTFALL 00H | 02/03/99 |
| 04 | OUTFALL 00H | 02/03/99 |
| 05 | OUTFALL 00H | 02/03/99 |
| 06 | OUTFALL 00H | 02/03/99 |
| 07 | OUTFALL 00H | 02/03/99 |
| 08 | OUTFALL 00H | 02/03/99 |
| 09 | OUTFALL 00H | 02/03/99 |
| 10 | OUTFALL 00H | 02/03/99 |
| 11 | OUTFALL 00H | 02/03/99 |
| 12 | OUTFALL 00H | 02/03/99 |
| 13 | OUTFALL 00H | 02/03/99 |
| 14 | OUTFALL 00H | 02/03/99 |
| 15 | OUTFALL 00H | 02/03/99 |

| Sample Number | Sample Description | |
|---|---|---|
| 16 | OUTFALL 00B | 02/03/99 |
| 17 | OUTFALL 00B | 02/03/99 |
| 18 | OUTFALL 00B | 02/03/99 |
| 19 | OUTFALL 00B | 02/03/99 |
| 20 | OUTFALL 00B | 02/03/99 |
| 21 | OUTFALL 00B | 02/03/99 |
| 22 | OUTFALL 00B | 02/03/99 |
| 23 | OUTFALL 00B | 02/03/99 |
| 24 | OUTFALL 00B | 02/03/99 |
| 25 | OUTFALL 00B | 02/03/99 |
| 26 | OUTFALL 00B | 02/03/99 |
| 27 | OUTFALL 00B | 02/03/99 |
| 28 | OUTFALL 00B | 02/03/99 |
| 29 | OUTFALL 00B | 02/03/99 |
| 30 | OUTFALL 00B | 02/03/99 |

Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Matt Lake. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

M. Lake

Certified By
MATT LAKE

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| MAGNESIUM, | EPA 200.7 | 8 | 1 | mg/L | 02/15/99 | RJE |
| MANGANESE, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/13/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/15/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | 0.08 | 0.01 | mg/L | 02/15/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/13/99 | RJE |

**Sample: 07A OUTFALL 00H** 02/03/99 Collected: 02/03/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 08A OUTFALL 00H** 02/03/99 Collected: 02/03/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | 0.03 | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 09A OUTFALL 00H** 02/03/99 Collected: 02/03/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/04/99 | ML |

**Sample: 10A OUTFALL 00H** 02/03/99 Collected: 02/03/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.36 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | 0.52 | 0.5 | mg/L | 02/06/99 | JB |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232 
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 114 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 95 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 03/10/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020932
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL) PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-d5 | 88 | 35 - 114 |
| 2-FLUOROBIPHENYL | 77 | 43 - 116 |
| p-TERPHENYL-d14 | 90 | 33 - 141 |
| PHENOL-d6 | 38 | 10 - 94 |
| 2-FLUOROPHENOL | 32 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 36 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022527
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-232 
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 90 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 94 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020942
UNITS ug/L


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608
Collected: 02/03/99 Category: AQUEOUS

Test Code: 608

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 15A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 105 | 35 - 114 |
| 2-FLUOROBIPHENYL | 120 Q | 43 - 116 |
| p-TERPHENYL-d14 | 125 | 33 - 141 |
| PHENOL-d6 | 40 | 10 - 94 |
| 2-FLUOROPHENOL | 53 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 150 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206505W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B
Test Description: EPA 624
Collected: 02/03/99

02/03/99 Lab No: 19A
Method: 624
Category: AQUEOUS

Test Code: 624_X

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 112 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 92 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020933
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL) PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 86 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 74 | 43 | - | 116 |
| p-TERPHENYL-d14 | 91 | 33 | - | 141 |
| PHENOL-d6 | 76 | 10 | - | 94 |
| 2-FLUOROPHENOL | 82 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 78 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/26/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022605
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 93 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 95 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020943
UNITS ug/L



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 30A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 80 | 35 - 114 |
| 2-FLUOROBIPHENYL | 80 | 43 - 116 |
| p-TERPHENYL-d14 | 73 | 33 - 141 |
| PHENOL-d6 | 10 | 10 - 94 |
| 2-FLUOROPHENOL | 4 Q | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 4 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST MN
INSTRUMENT SATURN
FILE ID 0206502W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

Additional Sample Data
(Cook Nuclear Lab)



| Date | Al (ug/l) | Date | Al (ug/l) | | |
|---|---|---|---|---|---|
| 2/3/99 | 220 | 5/4/02 | 5 1 | | |
| 5/2/02 | 5 34 | 5/4/02 | 5 02 | | |
| 5/2/02 | 4 73 | 5/4/02 | 4.12 | | |
| 5/2/02 | 4 86 | 5/4/02 | 2 56 | | |
| 5/2/02 | 5 3 | 5/4/02 | 5 26 | | |
| 5/3/02 | 5 27 | 5/4/02 | 4 92 | | |
| 5/3/02 | 4 8 | 5/4/02 | 3 65 | | |
| 5/3/02 | 3 34 | 5/4/02 | 3 88 | | |
| 5/3/02 | 5 08 | 5/4/02 | 5 39 | | |
| 5/3/02 | 4 27 | 5/4/02 | 6 69 | | |
| 5/3/02 | 5 09 | 5/4/02 | 6 48 | | |
| 5/3/02 | 3 95 | 5/4/02 | 6 7 | | |
| 5/3/02 | 5 71 | 5/4/02 | 6 05 | | |
| 5/4/02 | 4 38 | 5/4/02 | 7.81 | | |
| 5/4/02 | 5 2 | 5/4/02 | 5 83 | | |
| 5/4/02 | 4.14 | 5/4/02 | 4.34 | | |
| 5/4/02 | 5.12 | | | | |
| 5/4/02 | 4 54 | Max | 220 | | |
| 5/4/02 | 3 12 | Max monthly | 220 00 | | |
| 5/4/02 | 3 02 | Count | 57 | | |
| 5/4/02 | 4 13 | Method | 200 7 | | |
| 5/4/02 | 3 17 | | | | |
| 5/4/02 | 4.66 | | | | |
| 5/4/02 | 3 88 | | | | |
| 5/4/02 | 4 73 | | | | |
| 5/4/02 | 4 72 | | | | |
| 5/4/02 | 3.75 | | | | |
| 5/4/02 | 2 45 | | | | |
| 5/4/02 | 3 22 | | | | |
| 5/4/02 | 3 86 | | | | |
| 5/4/02 | 4 52 | | | | |
| 5/4/02 | 2 02 | | | | |
| 5/4/02 | 2 18 | | | | |
| 5/4/02 | 3 9 | | | | |
| 5/4/02 | 4 26 | | | | |
| 5/4/02 | 1 84 | | | | |
| 5/4/02 | 2 95 | | | | |
| 5/4/02 | 4 78 | | | | |
| 5/4/02 | 3 52 | | | | |
| 5/4/02 | 2.77 | | | | |
| 5/4/02 | 3 96 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Section III B. 6 and 7

Additional sample data
(Cook Nuclear Lab)

00A Manganese uGL

| | Date | Mn (ug/l) |
|---|---|---|
| | 5/2/02 | 2.65 |
| | 5/3/02 | 2.44 |
| | 5/3/02 | 2.51 |
| | 5/4/02 | 2.67 |
| | 5/4/02 | 3.19 |
| | 5/4/02 | 3.61 |
| | 5/4/02 | 4.21 |
| | 5/4/02 | 4.16 |
| | 5/4/02 | 5 |
| | 5/4/02 | 4.2 |
| | 5/4/02 | 3.68 |
| | 5/4/02 | 4.31 |
| | 5/4/02 | 6.81 |
| | 5/4/02 | 7.12 |
| | | |
| | Max | 7.12 |
| | Max monthly | 4.0 |
| | Count | 14 |
| | Method | 200.7 |

Additional Sample Data
(Cook Nuclear Lab)



| Date | Mg (ug/l) |
|---|---|
| 3/14/01 | < 0.2 |
| 4/26/01 | 0.11 |
| 4/27/01 | 0.13 |
| 4/29/01 | 0.15 |
| 5/18/01 | 0.26 |
| 5/2/02 | 3.78 |
| 5/3/02 | 3.2 |
| 5/3/02 | 3.25 |
| 5/4/02 | 3.37 |
| 5/4/02 | 4.18 |
| 5/4/02 | 4.62 |
| 5/4/02 | 5.41 |
| 5/4/02 | 4.53 |
| 5/4/02 | 5.99 |
| 5/4/02 | 5.35 |
| 5/4/02 | 6.45 |
| 5/4/02 | 9.12 |
| 5/4/02 | 18.5 |
| 5/4/02 | 19.3 |
| | |
| Max | 19.3 |
| Max monthly | 6.9 |
| Count | 19 |
| Method | 200.7 |

Non-routine sample data
(Cook Nuclear Lab)



| Date | Hydrazine ug/L |
|---|---|
| 2/16/01 | 999 |
| 2/17/01 | 34 |
| 2/18/01 | 254 |
| 8/29/01 | 34 |
| 8/30/01 | 87 |
| 9/5/01 | 205 |
| 9/15/01 | 124 |
| 9/15/01 | 121 |
| 9/20/01 | 104 |
| 9/26/01 | 116 |
| 9/27/01 | 122 |
| 9/28/01 | 16 |
| 9/28/01 | 10 |
| 9/29/01 | 2 |
| 5/5/02 | 80 |
| 5/8/02 | 126 |
| 5/9/02 | 118 |
| 5/16/02 | 102 |
| 5/28/02 | 119 |
| 5/30/02 | 109 |
| 6/5/02 | 131 |
| 6/6/02 | 106 |
| 6/7/02 | 1 |
| 6/8/02 | 1 |

| | |
|---|---|
| Max | 999 |
| Monthly Max | 429 |
| Count | 24 |

Method: ASTM D 1385
QL: 3 ug/l
DL: 10 ug/l

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00A Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/2/01 | 6 56 | 1/15/01 | 4 66 | 1/27/01 | 12.7 | 2/7/01 | 6.62 | 2/19/01 | 8 03 | 3/2/01 | 4.94 |
| 1/2/01 | 7 38 | 1/15/01 | 4.61 | 1/27/01 | 12 7 | 2/7/01 | 6 59 | 2/19/01 | 5 28 | 3/2/01 | 4.89 |
| 1/2/01 | 7 3 | 1/16/01 | 4.78 | 1/27/01 | 12.6 | 2/8/01 | 6 55 | 2/19/01 | 6.42 | 3/3/01 | 4.99 |
| 1/2/01 | 7.33 | 1/16/01 | 4.8 | 1/27/01 | 12.6 | 2/8/01 | 6 57 | 2/19/01 | 5.94 | 3/3/01 | 4.99 |
| 1/3/01 | 9.11 | 1/16/01 | 4.75 | 1/28/01 | 10.3 | 2/8/01 | 6.55 | 2/20/01 | 1.13 | 3/3/01 | 4.95 |
| 1/3/01 | 9 2 | 1/16/01 | 4 82 | 1/28/01 | 10 6 | 2/8/01 | 6 55 | 2/20/01 | 1 04 | 3/3/01 | 4.87 |
| 1/3/01 | 9 43 | 1/17/01 | 6 4 | 1/28/01 | 10 5 | 2/9/01 | 5 87 | 2/20/01 | 0.96 | 3/4/01 | 4.7 |
| 1/3/01 | 9 01 | 1/17/01 | 6 39 | 1/28/01 | 10 6 | 2/9/01 | 5.15 | 2/20/01 | 0.99 | 3/4/01 | 4.64 |
| 1/4/01 | 4.26 | 1/17/01 | 6 3 | 1/29/01 | 8 12 | 2/9/01 | 5 15 | 2/21/01 | 3.41 | 3/4/01 | 4.58 |
| 1/4/01 | 4.48 | 1/17/01 | 6 66 | 1/29/01 | 8.04 | 2/9/01 | 4 98 | 2/21/01 | 3 43 | 3/4/01 | 4.52 |
| 1/4/01 | 4.64 | 1/18/01 | 2.63 | 1/29/01 | 8 29 | 2/10/01 | 3 89 | 2/21/01 | 3.44 | 3/5/01 | 3.448 |
| 1/5/01 | 8 89 | 1/18/01 | 2.7 | 1/29/01 | 8.19 | 2/10/01 | 3 88 | 2/21/01 | 3.45 | 3/5/01 | 3.54 |
| 1/7/01 | 2.75 | 1/18/01 | 2 8 | 1/30/01 | 8 08 | 2/10/01 | 3 88 | 2/22/01 | 3 81 | 3/5/01 | 3 412 |
| 1/7/01 | 2.68 | 1/18/01 | 2.74 | 1/30/01 | 8 02 | 2/10/01 | 3 78 | 2/22/01 | 3 81 | 3/5/01 | 3.71 |
| 1/7/01 | 2.78 | 1/19/01 | 2 43 | 1/30/01 | 8 09 | 2/11/01 | 1 69 | 2/22/01 | 3 74 | 3/6/01 | 2 59 |
| 1/7/01 | 2.53 | 1/19/01 | 2 43 | 1/30/01 | 8 08 | 2/11/01 | 1.69 | 2/22/01 | 3.73 | 3/6/01 | 2 46 |
| 1/8/01 | 3 29 | 1/19/01 | 2.41 | 1/31/01 | 8 81 | 2/11/01 | 1 55 | 2/23/01 | 6.77 | 3/6/01 | 2.48 |
| 1/8/01 | 3 24 | 1/19/01 | 2.39 | 1/31/01 | 8 89 | 2/11/01 | 1 44 | 2/23/01 | 6 73 | 3/6/01 | 2.46 |
| 1/8/01 | 3 27 | 1/20/01 | 2 45 | 1/31/01 | 8 58 | 2/12/01 | 3.71 | 2/23/01 | 6 56 | 3/7/01 | 3.15 |
| 1/8/01 | 3 23 | 1/20/01 | 2 47 | 1/31/01 | 8.18 | 2/12/01 | 3.74 | 2/23/01 | 6.58 | 3/7/01 | 3.1 |
| 1/9/01 | 4.17 | 1/20/01 | 2.5 | 2/1/01 | 6.51 | 2/12/01 | 3.72 | 2/24/01 | 6.734 | 3/7/01 | 3.14 |
| 1/9/01 | 4.1 | 1/20/01 | 2.48 | 2/1/01 | 6.22 | 2/12/01 | 3.7 | 2/24/01 | 6.711 | 3/7/01 | 3.12 |
| 1/9/01 | 4.13 | 1/21/01 | 3.03 | 2/1/01 | 6.35 | 2/13/01 | 4.61 | 2/24/01 | 6.57 | 3/8/01 | 7.35 |
| 1/9/01 | 4 09 | 1/21/01 | 3 38 | 2/1/01 | 6 2 | 2/13/01 | 4.57 | 2/24/01 | 6.548 | 3/8/01 | 7.38 |
| 1/10/01 | 8 89 | 1/21/01 | 3 48 | 2/2/01 | 5 39 | 2/13/01 | 4 47 | 2/25/01 | 5.701 | 3/8/01 | 7.37 |
| 1/10/01 | 8 8 | 1/21/01 | 3 4 | 2/2/01 | 5 31 | 2/13/01 | 4.5 | 2/25/01 | 5 849 | 3/8/01 | 7.35 |
| 1/10/01 | 8 77 | 1/22/01 | 4 69 | 2/2/01 | 5 28 | 2/14/01 | 5 04 | 2/25/01 | 5 69 | 3/9/01 | 9.78 |
| 1/10/01 | 8.71 | 1/22/01 | 4 75 | 2/2/01 | 5 2 | 2/14/01 | 4 95 | 2/25/01 | 5.652 | 3/9/01 | 9.67 |
| 1/11/01 | 10.45 | 1/22/01 | 4.67 | 2/3/01 | 5 87 | 2/14/01 | 4.97 | 2/26/01 | 6.651 | 3/9/01 | 9.7 |
| 1/11/01 | 10 37 | 1/22/01 | 4.69 | 2/3/01 | 5 8 | 2/14/01 | 4 9 | 2/26/01 | 6.701 | 3/9/01 | 9.71 |
| 1/11/01 | 10.56 | 1/23/01 | 4.57 | 2/3/01 | 5.77 | 2/15/01 | 5.21 | 2/26/01 | 6.654 | 3/10/01 | 11.6 |
| 1/11/01 | 10.55 | 1/23/01 | 4.59 | 2/3/01 | 5.78 | 2/15/01 | 5 17 | 2/26/01 | 6 583 | 3/10/01 | 11 6 |
| 1/12/01 | 7 83 | 1/23/01 | 4.62 | 2/4/01 | 5.7 | 2/15/01 | 5.14 | 2/27/01 | 3.55 | 3/10/01 | 11.5 |
| 1/12/01 | 7.66 | 1/23/01 | 4.63 | 2/4/01 | 5 9 | 2/15/01 | 4 91 | 2/27/01 | 3 53 | 3/10/01 | 11 5 |
| 1/12/01 | 7.86 | 1/24/01 | 9 22 | 2/4/01 | 6 1 | 2/16/01 | 15 93 | 2/27/01 | 3 6 | 3/11/01 | 9 88 |
| 1/12/01 | 7.96 | 1/24/01 | 9 18 | 2/4/01 | 5 9 | 2/16/01 | 1.65 | 2/27/01 | 3.59 | 3/11/01 | 9.9 |
| 1/13/01 | 6 07 | 1/24/01 | 9 23 | 2/5/01 | 5 67 | 2/16/01 | 1 21 | 2/28/01 | 5 51 | 3/11/01 | 9.63 |
| 1/13/01 | 5 94 | 1/24/01 | 9 25 | 2/5/01 | 5.73 | 2/16/01 | 5.47 | 2/28/01 | 5.57 | 3/11/01 | 9.76 |
| 1/13/01 | 5 88 | 1/25/01 | 5 65 | 2/5/01 | 5 9 | 2/17/01 | 23.94 | 2/28/01 | 5.42 | 3/12/01 | 2.04 |
| 1/13/01 | 5.86 | 1/25/01 | 5 582 | 2/5/01 | 5 83 | 2/17/01 | 4 91 | 2/28/01 | 5.44 | 3/12/01 | 2.13 |
| 1/14/01 | 5.7 | 1/25/01 | 5.657 | 2/6/01 | 6 86 | 2/17/01 | 7 3 | 3/1/01 | 6 24 | 3/12/01 | 2.03 |
| 1/14/01 | 5 64 | 1/25/01 | 5.624 | 2/6/01 | 6 79 | 2/17/01 | 6 08 | 3/1/01 | 6 23 | 3/12/01 | 2 07 |
| 1/14/01 | 5.65 | 1/26/01 | 9.58 | 2/6/01 | 6 78 | 2/18/01 | 8 06 | 3/1/01 | 6 22 | 3/13/01 | 4 875 |
| 1/14/01 | 5.66 | 1/26/01 | 9.59 | 2/6/01 | 6 85 | 2/18/01 | 3 65 | 3/1/01 | 6 21 | 3/13/01 | 4 811 |
| 1/15/01 | 4.58 | 1/26/01 | 9.63 | 2/7/01 | 6 73 | 2/18/01 | 5 55 | 3/2/01 | 4.79 | 3/13/01 | 4.787 |
| 1/15/01 | 4.61 | 1/26/01 | 9.65 | 2/7/01 | 6.6 | 2/18/01 | 5.9 | 3/2/01 | 4.82 | 3/13/01 | 4.737 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00A Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/14/01 | 5 963 | 3/26/01 | 5 61 | 4/7/01 | 6 91 | 4/18/01 | 5.94 | 4/29/01 | 6 86 | 5/11/01 | 4.21 |
| 3/14/01 | 6.025 | 3/26/01 | 5 58 | 4/7/01 | 7 29 | 4/18/01 | 6 | 4/30/01 | 6.23 | 5/11/01 | 4.32 |
| 3/14/01 | 6.109 | 3/27/01 | 6.2 | 4/7/01 | 6 99 | 4/18/01 | 5 91 | 4/30/01 | 6 6 | 5/11/01 | 4.41 |
| 3/14/01 | 6 019 | 3/27/01 | 6.01 | 4/7/01 | 7.1 | 4/19/01 | 6 23 | 4/30/01 | 6 62 | 5/12/01 | 0 91 |
| 3/15/01 | 6 35 | 3/27/01 | 5 87 | 4/8/01 | 7.208 | 4/19/01 | 6 19 | 4/30/01 | 6 58 | 5/12/01 | 1 34 |
| 3/15/01 | 6 31 | 3/27/01 | 5.8 | 4/8/01 | 7.354 | 4/19/01 | 6.11 | 5/1/01 | 6 34 | 5/12/01 | 1 34 |
| 3/15/01 | 6.26 | 3/28/01 | 6 59 | 4/8/01 | 7.418 | 4/19/01 | 6 1 | 5/1/01 | 6.46 | 5/12/01 | 1.23 |
| 3/15/01 | 6 21 | 3/28/01 | 6.41 | 4/8/01 | 7.39 | 4/20/01 | 6 08 | 5/1/01 | 6 49 | 5/13/01 | 3.27 |
| 3/16/01 | 6 4 | 3/28/01 | 6.46 | 4/9/01 | 6 804 | 4/20/01 | 6 01 | 5/1/01 | 6 42 | 5/13/01 | 3.51 |
| 3/16/01 | 6.31 | 3/28/01 | 6.32 | 4/9/01 | 6.941 | 4/20/01 | 5.26 | 5/2/01 | 6 85 | 5/13/01 | 3 49 |
| 3/16/01 | 6.12 | 3/29/01 | 6 07 | 4/9/01 | 6 803 | 4/20/01 | 5 32 | 5/2/01 | 6.18 | 5/13/01 | 3.58 |
| 3/16/01 | 6 28 | 3/29/01 | 5.91 | 4/9/01 | 6 684 | 4/21/01 | 5 76 | 5/2/01 | 5.18 | 5/15/01 | 2 92 |
| 3/17/01 | 1.65 | 3/29/01 | 5.93 | 4/10/01 | 2.92 | 4/21/01 | 5.64 | 5/2/01 | 5.1 | 5/15/01 | 2 82 |
| 3/17/01 | 1.68 | 3/29/01 | 5.86 | 4/10/01 | 2.92 | 4/21/01 | 5.65 | 5/3/01 | 6 63 | 5/15/01 | 2 81 |
| 3/17/01 | 1.65 | 3/30/01 | 5.785 | 4/10/01 | 2.89 | 4/21/01 | 5 63 | 5/3/01 | 6 55 | 5/15/01 | 2 93 |
| 3/17/01 | 1.61 | 3/30/01 | 5 8 | 4/10/01 | 2.88 | 4/22/01 | 1.93 | 5/3/01 | 6.75 | 5/16/01 | 9.38 |
| 3/19/01 | 5.72 | 3/30/01 | 5 845 | 4/11/01 | 5 42 | 4/22/01 | 1.95 | 5/3/01 | 6.74 | 5/16/01 | 9.83 |
| 3/19/01 | 5.73 | 3/30/01 | 5.785 | 4/11/01 | 5 12 | 4/22/01 | 1.93 | 5/4/01 | 6.857 | 5/16/01 | 9 68 |
| 3/19/01 | 5.72 | 3/31/01 | 3.133 | 4/11/01 | 5 53 | 4/22/01 | 1 88 | 5/4/01 | 6 818 | 5/17/01 | 2.57 |
| 3/19/01 | 5.7 | 3/31/01 | 3.121 | 4/11/01 | 5 46 | 4/23/01 | 3 55 | 5/4/01 | 6 93 | 5/17/01 | 2.47 |
| 3/20/01 | 5 43 | 3/31/01 | 2.793 | 4/12/01 | 2 96 | 4/23/01 | 2.45 | 5/4/01 | 6 883 | 5/17/01 | 2.52 |
| 3/20/01 | 5.394 | 3/31/01 | 2 956 | 4/12/01 | 4 92 | 4/23/01 | 2.31 | 5/5/01 | 5.614 | 5/17/01 | 2.43 |
| 3/20/01 | 5.456 | 4/1/01 | 2.918 | 4/12/01 | 6 6 | 4/23/01 | 2 43 | 5/5/01 | 5 611 | 5/18/01 | 3.69 |
| 3/20/01 | 5 465 | 4/1/01 | 2 852 | 4/12/01 | 6 52 | 4/24/01 | 4.75 | 5/5/01 | 5.392 | 5/18/01 | 3.84 |
| 3/21/01 | 5 17 | 4/1/01 | 2 913 | 4/13/01 | 6 72 | 4/24/01 | 4.71 | 5/5/01 | 5 366 | 5/18/01 | 2.89 |
| 3/21/01 | 5 17 | 4/1/01 | 2 92 | 4/13/01 | 6 61 | 4/24/01 | 4 69 | 5/6/01 | 2.119 | 5/18/01 | 3 24 |
| 3/21/01 | 5 23 | 4/2/01 | 5 576 | 4/13/01 | 6 65 | 4/24/01 | 4.7 | 5/6/01 | 2.098 | 5/19/01 | 5 41 |
| 3/21/01 | 5 27 | 4/2/01 | 5 886 | 4/13/01 | 6 72 | 4/25/01 | 4 84 | 5/6/01 | 2.026 | 5/19/01 | 5.53 |
| 3/22/01 | 5.665 | 4/2/01 | 5.998 | 4/14/01 | 5 803 | 4/25/01 | 4 64 | 5/6/01 | 2 059 | 5/19/01 | 5.42 |
| 3/22/01 | 5 714 | 4/2/01 | 5 973 | 4/14/01 | 5 404 | 4/25/01 | 4 64 | 5/7/01 | 3.173 | 5/19/01 | 5 43 |
| 3/22/01 | 5.795 | 4/3/01 | 7.56 | 4/14/01 | 6.228 | 4/25/01 | 4.61 | 5/7/01 | 3.13 | 5/20/01 | 3.58 |
| 3/22/01 | 5.677 | 4/3/01 | 7.61 | 4/14/01 | 6.054 | 4/26/01 | 4.11 | 5/7/01 | 3.2 | 5/20/01 | 3.77 |
| 3/23/01 | 6.9 | 4/3/01 | 7.6 | 4/15/01 | 4.391 | 4/26/01 | 4 02 | 5/7/01 | 3.12 | 5/20/01 | 3.76 |
| 3/23/01 | 6.8 | 4/3/01 | 7.7 | 4/15/01 | 3 838 | 4/26/01 | 4 06 | 5/8/01 | 3.92 | 5/20/01 | 4.7 |
| 3/23/01 | 6.7 | 4/4/01 | 8.32 | 4/15/01 | 3.068 | 4/26/01 | 3 98 | 5/8/01 | 3.89 | 5/21/01 | 6.66 |
| 3/23/01 | 6.7 | 4/4/01 | 8.16 | 4/15/01 | 3.796 | 4/27/01 | 6.08 | 5/8/01 | 3 91 | 5/21/01 | 6 66 |
| 3/24/01 | 5.71 | 4/4/01 | 8.19 | 4/16/01 | 6.142 | 4/27/01 | 6.15 | 5/8/01 | 3.88 | 5/21/01 | 6 64 |
| 3/24/01 | 5 8 | 4/4/01 | 8 06 | 4/16/01 | 5.976 | 4/27/01 | 6.14 | 5/9/01 | 3.76 | 5/21/01 | 6 66 |
| 3/24/01 | 5 94 | 4/5/01 | 8.33 | 4/16/01 | 4.597 | 4/27/01 | 6.14 | 5/9/01 | 3.78 | 5/22/01 | 5 46 |
| 3/24/01 | 5.93 | 4/5/01 | 8.22 | 4/16/01 | 4 597 | 4/28/01 | 7.13 | 5/9/01 | 3.84 | 5/22/01 | 5 34 |
| 3/25/01 | 5.37 | 4/5/01 | 8.2 | 4/16/01 | 5.348 | 4/28/01 | 7.17 | 5/9/01 | 3.84 | 5/22/01 | 5 4 |
| 3/25/01 | 5.52 | 4/5/01 | 8.29 | 4/17/01 | 6 29 | 4/28/01 | 7.15 | 5/10/01 | 4.62 | 5/22/01 | 5 29 |
| 3/25/01 | 5.5 | 4/6/01 | 7.49 | 4/17/01 | 6 37 | 4/28/01 | 7.2 | 5/10/01 | 4.61 | 6/1/01 | 4.78 |
| 3/25/01 | 5 33 | 4/6/01 | 8.24 | 4/17/01 | 6.44 | 4/29/01 | 6.39 | 5/10/01 | 4 64 | 6/1/01 | 4.67 |
| 3/26/01 | 5 57 | 4/6/01 | 7.62 | 4/17/01 | 6 11 | 4/29/01 | 6.79 | 5/10/01 | 4.66 | 6/1/01 | 4.71 |
| 3/26/01 | 6 8 | 4/6/01 | 7.62 | 4/18/01 | 5.98 | 4/29/01 | 6.87 | 5/11/01 | 4.34 | 6/1/01 | 4 71 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00A Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/2/01 | 4 28 | 6/13/01 | 5 22 | 7/7/01 | 2.56 | 8/11/01 | 9.27 | 8/23/01 | 3.36 | 9/14/01 | 91.16 |
| 6/2/01 | 4 24 | 6/13/01 | 5.2 | 7/8/01 | 3.37 | 8/11/01 | 9 26 | 8/23/01 | 3.33 | 9/14/01 | 90.54 |
| 6/2/01 | 4.18 | 6/14/01 | 5 08 | 7/9/01 | 3.59 | 8/12/01 | 8 21 | 8/23/01 | 3.31 | 9/15/01 | 95.9 |
| 6/2/01 | 4.06 | 6/14/01 | 5 03 | 7/10/01 | 3.49 | 8/12/01 | 8.12 | 8/23/01 | 3.28 | 9/15/01 | 100 |
| 6/3/01 | 1 2 | 6/14/01 | 5 | 7/11/01 | 3.94 | 8/12/01 | 8.11 | 8/24/01 | 4.15 | 9/17/01 | 127 |
| 6/3/01 | 1.19 | 6/14/01 | 4.99 | 7/12/01 | 4.57 | 8/12/01 | 8.06 | 8/24/01 | 4.2 | 9/20/01 | 91.3 |
| 6/3/01 | 1 17 | 6/15/01 | 5 405 | 7/13/01 | 5.102 | 8/13/01 | 6 4 | 8/24/01 | 4.27 | 9/20/01 | 94.3 |
| 6/3/01 | 1 16 | 6/15/01 | 5 347 | 7/27/01 | 5 55 | 8/13/01 | 6 4 | 8/24/01 | 4 21 | 9/20/01 | 70.05 |
| 6/4/01 | 2 65 | 6/15/01 | 5.473 | 7/27/01 | 5.41 | 8/13/01 | 6 47 | 8/25/01 | 3 54 | 9/20/01 | 44.6 |
| 6/4/01 | 2 63 | 6/15/01 | 5.39 | 7/28/01 | 4 8 | 8/13/01 | 6.44 | 8/25/01 | 3 46 | 9/27/01 | 86.9 |
| 6/4/01 | 2.64 | 6/16/01 | 5 25 | 7/28/01 | 4.76 | 8/14/01 | 5 38 | 8/25/01 | 3.53 | 9/27/01 | 83.7 |
| 6/4/01 | 2.6 | 6/16/01 | 5 31 | 7/28/01 | 4.71 | 8/14/01 | 5 26 | 8/25/01 | 3.56 | 9/27/01 | 67.6 |
| 6/5/01 | 3 25 | 6/16/01 | 5.35 | 7/28/01 | 4.7 | 8/14/01 | 5.32 | 8/26/01 | 4 18 | 9/27/01 | 45.4 |
| 6/5/01 | 3 25 | 6/16/01 | 5.29 | 7/29/01 | 2 82 | 8/14/01 | 5.2 | 8/26/01 | 4.25 | 9/28/01 | 95 4 |
| 6/5/01 | 3 21 | 6/17/01 | 3.46 | 7/29/01 | 2.76 | 8/15/01 | 5.97 | 8/26/01 | 4.17 | 9/28/01 | 82.1 |
| 6/5/01 | 3 2 | 6/17/01 | 3.5 | 7/29/01 | 2 78 | 8/15/01 | 5.87 | 8/26/01 | 4.27 | 9/28/01 | 51 |
| 6/6/01 | 3.67 | 6/17/01 | 3.44 | 7/29/01 | 2 77 | 8/15/01 | 5.85 | 8/27/01 | 5 85 | 9/28/01 | 57.1 |
| 6/6/01 | 3.5 | 6/17/01 | 3.45 | 7/30/01 | 4 87 | 8/15/01 | 5.8 | 8/27/01 | 5 83 | 9/29/01 | 52 7 |
| 6/6/01 | 3 48 | 6/18/01 | 5.17 | 7/30/01 | 4 88 | 8/16/01 | 3 32 | 8/27/01 | 5 9 | 9/29/01 | 22 7 |
| 6/6/01 | 3 44 | 6/18/01 | 5.184 | 7/30/01 | 4 85 | 8/16/01 | 3.38 | 8/27/01 | 5.85 | 9/29/01 | 27.6 |
| 6/7/01 | 4 02 | 6/18/01 | 5.135 | 7/30/01 | 4 76 | 8/16/01 | 3.29 | 8/28/01 | 9.66 | 9/29/01 | 32.1 |
| 6/7/01 | 4.07 | 6/18/01 | 5.106 | 7/31/01 | 5.19 | 8/16/01 | 3.26 | 8/28/01 | 9.79 | 9/29/01 | 24.6 |
| 6/7/01 | 3.99 | 6/19/01 | 5 9 | 7/31/01 | 5.18 | 8/17/01 | 2.03 | 8/28/01 | 9 58 | 9/29/01 | 16.6 |
| 6/7/01 | 4.08 | 6/19/01 | 5 89 | 7/31/01 | 5.17 | 8/17/01 | 2 | 8/28/01 | 9.7 | 9/29/01 | 19.4 |
| 6/8/01 | 4.2 | 6/19/01 | 5 86 | 7/31/01 | 5.1 | 8/17/01 | 1.98 | 8/29/01 | 1.2 | 9/29/01 | 15.6 |
| 6/8/01 | 4.1 | 6/19/01 | 5 8 | 8/5/01 | 3 9 | 8/17/01 | 1.98 | 8/29/01 | 19 1 | 9/30/01 | 6 81 |
| 6/8/01 | 4.2 | 6/20/01 | 6 38 | 8/5/01 | 3 84 | 8/18/01 | 4.38 | 8/29/01 | 0 87 | 9/30/01 | 7.9 |
| 6/8/01 | 4.1 | 6/20/01 | 6 22 | 8/5/01 | 3 85 | 8/18/01 | 4.38 | 8/29/01 | 17.5 | 9/30/01 | 6.11 |
| 6/9/01 | 4.61 | 6/20/01 | 6.22 | 8/6/01 | 4 91 | 8/18/01 | 4.31 | 8/30/01 | 108.7 | 9/30/01 | 6 54 |
| 6/9/01 | 4 54 | 6/20/01 | 6.21 | 8/6/01 | 4 9 | 8/18/01 | 4.33 | 8/30/01 | 40.1 | 1/2/02 | 15 8 |
| 6/9/01 | 4 51 | 6/21/01 | 5.5 | 8/6/01 | 4.86 | 8/19/01 | 3 45 | 8/30/01 | 0.48 | 1/2/02 | 15.5 |
| 6/9/01 | 4.55 | 6/22/01 | 4 99 | 8/6/01 | 4.86 | 8/19/01 | 3.42 | 8/30/01 | 36.7 | 1/2/02 | 15.7 |
| 6/10/01 | 2.86 | 6/23/01 | 4.7 | 8/7/01 | 5.39 | 8/19/01 | 3.42 | 8/31/01 | 85.07 | 1/2/02 | 15.3 |
| 6/10/01 | 2 8 | 6/24/01 | 1.86 | 8/7/01 | 5.83 | 8/19/01 | 3 38 | 8/31/01 | 11.7 | 1/9/02 | 9.61 |
| 6/10/01 | 2 78 | 6/25/01 | 3.12 | 8/7/01 | 5.41 | 8/20/01 | 3.37 | 8/31/01 | 98 2 | 1/9/02 | 9.47 |
| 6/10/01 | 2 78 | 6/26/01 | 4.82 | 8/7/01 | 5 38 | 8/20/01 | 3 34 | 8/31/01 | 130 | 1/9/02 | 9 36 |
| 6/11/01 | 4 11 | 6/27/01 | 4.8 | 8/8/01 | 5 52 | 8/20/01 | 3.34 | 8/31/01 | 49.6 | 1/9/02 | 9.86 |
| 6/11/01 | 4 12 | 6/28/01 | 4 59 | 8/8/01 | 5.54 | 8/20/01 | 3 36 | 9/1/01 | 97.3 | 1/16/02 | 13 |
| 6/11/01 | 4 11 | 6/29/01 | 4 4 | 8/8/01 | 5.53 | 8/21/01 | 3 59 | 9/5/01 | 96.5 | 1/16/02 | 14 |
| 6/11/01 | 4.07 | 6/30/01 | 4 23 | 8/8/01 | 5 48 | 8/21/01 | 3.58 | 9/5/01 | 105.8 | 1/16/02 | 12.5 |
| 6/12/01 | 4.97 | 7/1/01 | 2.75 | 8/10/01 | 7.24 | 8/21/01 | 3.57 | 9/5/01 | 128.5 | 1/16/02 | 12.5 |
| 6/12/01 | 4.91 | 7/2/01 | 2.71 | 8/10/01 | 7.15 | 8/21/01 | 3.49 | 9/5/01 | 48.2 | 1/23/02 | 14.7 |
| 6/12/01 | 4.92 | 7/3/01 | 8 4 | 8/10/01 | 7.19 | 8/22/01 | 3.28 | 9/9/01 | 136 | 1/23/02 | 15.2 |
| 6/12/01 | 4.88 | 7/4/01 | 5 08 | 8/10/01 | 7.18 | 8/22/01 | 3.21 | 9/10/01 | 99.4 | 1/23/02 | 15.7 |
| 6/13/01 | 5.3 | 7/5/01 | 2 96 | 8/11/01 | 9 03 | 8/22/01 | 3.21 | 9/10/01 | 121.7 | 1/23/02 | 15 |
| 6/13/01 | 5.24 | 7/6/01 | 3.18 | 8/11/01 | 9 25 | 8/22/01 | 3.18 | 9/13/01 | 45.8 | 1/30/02 | 18.5 |

Section III.B 6

Non-routine sample data
(Cook Nuclear Lab)

00A Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|
| 1/30/02 | 17 2 | 4/10/02 | 9 03 | 6/5/02 | 37.5 | 8/28/02 | 11.65 |
| 1/30/02 | 16 9 | 4/17/02 | 8 44 | 6/5/02 | 28 63 | 9/4/02 | 13.74 |
| 1/30/02 | 17.3 | 4/17/02 | 8 83 | 6/5/02 | 28.3 | 9/4/02 | 13 3 |
| 2/6/02 | 20.6 | 4/17/02 | 9 22 | 6/12/02 | 5.72 | 9/4/02 | 13.7 |
| 2/6/02 | 20.9 | 4/17/02 | 8 96 | 6/12/02 | 5 84 | 9/4/02 | 13 5 |
| 2/6/02 | 20.7 | 4/24/02 | 8 39 | 6/12/02 | 5.81 | 9/11/02 | 11.59 |
| 2/6/02 | 20 8 | 4/24/02 | 8 45 | 6/12/02 | 5 66 | 9/11/02 | 11 05 |
| 2/13/02 | 12 9 | 4/24/02 | 8 46 | 6/19/02 | 1.57 | 9/11/02 | 11 26 |
| 2/13/02 | 14 | 4/24/02 | 8 53 | 6/19/02 | 1.48 | 9/11/02 | 11.37 |
| 2/13/02 | 14 8 | 5/1/02 | 3 77 | 6/19/02 | 1.5 | 9/18/02 | 11.12 |
| 2/13/02 | 15.2 | 5/1/02 | 3 61 | 6/19/02 | 1.42 | 9/18/02 | 10.78 |
| 2/20/02 | 5.18 | 5/1/02 | 3.56 | 7/3/02 | 2 48 | 9/18/02 | 10 86 |
| 2/20/02 | 5 23 | 5/1/02 | 3 54 | 7/3/02 | 2.51 | 9/18/02 | 10.56 |
| 2/20/02 | 5 23 | 5/5/02 | < 8.500 | 7/3/02 | 2.51 | 9/25/02 | 12.59 |
| 2/20/02 | 5.19 | 5/5/02 | < 9.700 | 7/3/02 | 2.54 | 9/25/02 | 12.12 |
| 2/27/02 | 14 | 5/5/02 | < 9.200 | 7/10/02 | 4.02 | 9/25/02 | 12.23 |
| 2/27/02 | 13 8 | 5/5/02 | < 7.600 | 7/10/02 | 4.02 | 9/25/02 | 12.02 |
| 2/27/02 | 14 3 | 5/8/02 | 25 8 | 7/10/02 | 3.95 | 10/2/02 | 10.8 |
| 2/27/02 | 14.2 | 5/8/02 | 24.8 | 7/10/02 | 4.02 | 10/2/02 | 10 2 |
| 3/6/02 | 11 43 | 5/8/02 | 22.2 | 7/17/02 | 6 69 | 10/2/02 | 10.5 |
| 3/6/02 | 11.68 | 5/9/02 | 27.76 | 7/17/02 | 6 97 | 10/2/02 | 10.3 |
| 3/6/02 | 11.58 | 5/9/02 | 24 2 | 7/17/02 | 6.48 | 10/9/02 | 7.15 |
| 3/6/02 | 11 88 | 5/9/02 | 27 66 | 7/17/02 | 6.51 | 10/9/02 | 7.17 |
| 3/13/02 | 11 2 | 5/9/02 | 22.26 | 7/24/02 | 8 06 | 10/9/02 | 7.28 |
| 3/13/02 | 11.1 | 5/16/02 | 21.1 | 7/24/02 | 7.88 | 10/9/02 | 7.24 |
| 3/13/02 | 11.1 | 5/16/02 | 22 9 | 7/24/02 | 8.13 | 10/16/02 | 12.9 |
| 3/13/02 | 11.2 | 5/16/02 | 25 2 | 7/24/02 | 8 05 | 10/16/02 | 12.8 |
| 3/20/02 | 12.2 | 5/16/02 | 23.1 | 7/31/02 | 9 | 10/16/02 | 12.85 |
| 3/20/02 | 12.2 | 5/18/02 | 19 | 7/31/02 | 9 01 | 10/16/02 | 12.83 |
| 3/20/02 | 12.7 | 5/18/02 | 19.9 | 7/31/02 | 8.94 | 10/23/02 | 14.4 |
| 3/20/02 | 12.2 | 5/18/02 | 22.7 | 7/31/02 | 8.51 | 10/23/02 | 14.3 |
| 3/27/02 | 13 83 | 5/18/02 | 21.7 | 8/7/02 | 11 62 | 10/23/02 | 14.7 |
| 3/27/02 | 13 31 | 5/23/02 | 22.9 | 8/7/02 | 11.94 | 10/23/02 | 14 3 |
| 3/27/02 | 13 08 | 5/23/02 | 25 3 | 8/7/02 | 11.82 | 10/30/02 | 11 6 |
| 3/27/02 | 13 28 | 5/23/02 | < 0 500 | 8/7/02 | 11 4 | 10/30/02 | 12 |
| 4/2/02 | 12.3 | 5/28/02 | 20 38 | 8/14/02 | 11.34 | 10/30/02 | 11 8 |
| 4/2/02 | 12 4 | 5/28/02 | 22.11 | 8/14/02 | 11.02 | 10/30/02 | 12.1 |
| 4/2/02 | 12.7 | 5/29/02 | 22.8 | 8/14/02 | 11.08 | 11/6/02 | 12 99 |
| 4/2/02 | 12.1 | 5/29/02 | 28.7 | 8/14/02 | 11.11 | 11/6/02 | 13.41 |
| 4/3/02 | 11.5 | 5/30/02 | 17.7 | 8/21/02 | 11 84 | 11/6/02 | 12.79 |
| 4/3/02 | 11.1 | 5/30/02 | 18 8 | 8/21/02 | 11.26 | 11/6/02 | 13.06 |
| 4/3/02 | 11 | 5/30/02 | 14.7 | 8/21/02 | 11.86 | | |
| 4/3/02 | 11 6 | 5/30/02 | 29 9 | 8/21/02 | 11.43 | Max | 136 |
| 4/10/02 | 9.03 | 5/30/02 | 15 5 | 8/28/02 | 11.51 | Monthly Avg | 65 6 |
| 4/10/02 | 8.68 | 6/4/02 | 27.5 | 8/28/02 | 11.42 | Count | 972 |
| 4/10/02 | 8 92 | 6/5/02 | 31.2 | 8/28/02 | 11.36 | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00A |

9 WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the DEQ under separate correspondence. The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this application.

A Are there water treatment additives in the discharge from this facility?

☐ No, proceed to item 4

☒ Yes

B. Have these water treatment additives been previously approved?

☐ No, continue with C. below.

☒ Yes. Submit a list of the previously approved water treatment additives and the date they were approved The information listed in C. 1-8 must be updated if it has changed since the previous approval

C. Submit a list of water treatment additives that are or may be discharged from the facility Applicants must submit the information listed below for each additive

1. The water treatment additive Material Safety Data Sheet.
2. The proposed water treatment additive discharge concentration.
3. The discharge frequency (i e., number of hours per day, week, etc.).
4 The outfall the water treatment additive is to be discharged from
5 The type of removal treatment, if any, that the water treatment additive receives prior to discharge.
6 The water treatment additive function (i.e , microbiocide, flocculant, etc ).
7 A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Cenodaphnia sp., Daphnia sp , or Simocephalus sp )
8 The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2)(a) of the Water Quality Standards Examples of tests that would meet this requirement include a 96-hour LC50 for a rainbow trout, bluegill, or fathead minnow.

The required toxicity information (described in items 7 and 8 above) is currently available in the SWQD files for the water treatment additives listed on the DEQ's Internet page **http://www.deq state mi.us/swq/gleas/docs/wta/WTAlist.doc** If you intend to use one of the water treatment additives on this list, only the information in items 1 through 6 above needs to be submitted to the SWQD.

**Note:** The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive.

10. WHOLE EFFLUENT TOXICITY TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results below unless the test has been submitted to the department in the last 5 years.

Michigan Department of Environmental Quality-Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

**PLEASE TYPE OR PRINT**

| FACILITY NAME | NPDES or COC PERMIT NUMBER | Outfall Number |
|---|---|---|
| **Donald C. Cook Nuclear Plant** | **MI0005827** | **00A** |

9 WATER TREATMENT ADDITIVES

| Water Treatment Additive | Approval Date |
|---|---|
| Ethanolamine solution, such as Betz Powerline 1440, Betz Powerline 1480, Nalco 92UM001 | 5/23/00 NPDES Permit approval 9/28/95 |
| Hydrazine Solution, such as Betz Cortrol OS5035, (Formerly Betz Powerline 1205), Betz Cortrol OS5010, Nalco 19H | 5/23/00 NPDES Permit approval 9/28/95 |
| Carbohydrazide Solution such as Nalco 1250 plus, Nalco Eliminox | 3/25/94 application, 4/15/94 approval, NPDES Permit approval 9/28/95 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Section III.B
# Outfall 00B

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B Outfall Information

nplete a separate Section III.B. - Outfall Information (pages 26-31) for each outfall at the facility. Make copies of this blank section of the application for additional outfalls as necessary.

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00B |

1. OUTFALL INFORMATION (see page 25 for instruction on completion of this page)

| | | | | | |
|---|---|---|---|---|---|
| A | Watershed: Lower St Joseph | | | | |
| B. | Receiving Water: Lake Michigan | | | | |
| C. | County: Berrien | | Township: Lake | | |
| D. | ¼, ¼: SW | ¼: NW | Section: 06 | Town: 06S | Range: 19W |
| E | Latitude: 41 58' 30" | | Longitude: 86 34' 30" | | |

F. Type of Wastewater Discharged (Check all that apply to this outfall)

- ☐ Contact Cooling
- ☐ Sanitary Wastewater
- ☐ Groundwater Cleanup
- ☐ Storm Water (regulated)
- ☐ Noncontact Cooling
- ☒ Process Wastewater
- ☐ Hydrostatic Pressure Test
- ☐ Storm Water (not regulated)
- ☐ Storm water subject to effluent guidelines (indicate under which category) ____
- ☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" in appendix) ____

J. What is the maximum Facility Design Flow Rate 1 MGD

G What is the maximum discharge flow authorized for this outfall
Seasonal Dischargers ____ MGY Continue with Item H
Continuous Dischargers 1 MGD Continue with Item I.

H Seasonal Discharge

List the discharge periods (by month) and the volume discharged in the space provided below.

| From | Through | Discharge Volume | Annual Total |
|---|---|---|---|
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |

I. Continuous Discharge

How often is there a discharge from this outfall (on the average)? 24 Hours/Day 365 Days/Year

**Batch dischargers must provide the following additional information:**

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate ____ Number of batches discharged per day: ____

| | Minimum | Average | Maximum |
|---|---|---|---|
| Batch Volume (gallons) | | | |
| Batch Duration (minutes) | | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

'ASE TYPE OR PRINT

| . ɔILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00B |

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility. Page 7 of the appendix contains an abbreviated list of various industries and the types of information each shall report in this application. For assistance call the Permits Section. All industries shall provide the name of each process and the SIC or the NAICS code for the process. If the wastestream is not regulated under federal categorical standards, the applicant shall report all pollutants which have the reasonable potential to be present in the discharge To submit additional information see page ii, item 8

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Steam Generator Blowdown

B. SIC or NAICS code. 4911

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)· Steam Generator Blowdown. 1 MGD maximum flow 2247 MWE tota plant electrical generation

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge· _____

B. SIC or NAICS code: _____

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A Name of the process contributing to the discharge: _____

B. SIC or NAICS code _____

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

## INSTRUCTIONS FOR COMPLETING SECTION III, ITEM B.3.

In accordance with 40 CFR 122.21, all applicants must report $CBOD_5$, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH The applicant may, however, request that reporting of data for one or more of these required parameters be waived. Such request must be supported by adequate rationale. The request shall be included as an attachment to this application.

Report available discharge data for the parameters listed. Actual data shall be provided for existing discharges and expected or estimated data provided for proposed discharges. Please include an explanation if "Pollution Prevention" is expected to provide reduction of pollutants. See Page 8 of the appendix for a list of specific parameters for which data must be provided for specific types of discharges (e.g., noncontact cooling waters, gasoline groundwater cleanups, etc ). For assistance in determining the appropriate parameters to report, call the Permits Section.

If data are available for other parameters not listed in Section III.B.3 , the applicant shall report these data in the blank spaces provided or attach the information to this application on 8½" x 11" paper.

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows: µg/l = micrograms per liter, mg/l = milligrams per liter, °F = degrees Fahrenheit, °C = degrees Celsius **See page ii number 5 for analytical requirements.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total $BOD_5$, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use **24-hour composite samples** unless other frequency-sample type analyses are available.

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the district office, on a separate sheet attached to the application form, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled. See pages ii and iii for sampling definitions, including "maximum daily concentration", and "maximum monthly concentration".

REPORTING OF INTAKE DATA

Applicants are required to report intake water data when they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants. A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters remaining after treatment which is not removed by the treatment system. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122.45(g)). To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information shall be submitted for each parameter:

a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.

b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed.

c) When applicable (for example, when the pollutant represents a class of compounds, e g., $BOD_5$, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge. Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants.

**Note:** Applicants for groundwater remediation discharges should also report the intake characteristics of contaminated groundwater.

STATE OF MICHIGAN

JOHN ENGLER, Governor
DEPARTMENT OF ENVIRONMENTAL QUALITY
"Better Service for a Better Environment"
HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973
INTERNET. www deq state.mi.us
RUSSELL J. HARDING, Director

REPLY TO:
PLAINWELL DISTRICT OFFICE
1342 SR 89 W STE B
PLAINWELL MI 49080-1915

January 28, 1999

Mr. John P. Carlson
Environmental Compliance Manager
Cook Nuclear Plant
One Cook Place
Bridgman, Michigan 49106

Dear Mr. Carlson:

SUBJECT: Application for Renewal of NPDES Permit No. MI0005827

We have reviewed the information provided in your letter of January 25, 1999. In that letter you request that representative outfalls be used to characterize effluent characteristics for similar outfalls. We approve your request as follows:

1. Effluent from Outfall 001 will be considered representative of outfalls 001, 002, and 003.

2. Effluent from Outfall 00B will be considered representative of outfalls 00A and 00B.

Please feel free to contact me if you have any questions.

Sincerely,

Gregory A. Danneffel
Plainwell District Office
Surface Water Quality Division
616-692-6968

cc: Mr. Blair Zordell, Cook Nuclear Plant
Mr. Dan Dell, Permits Section, SWQD
Ms. Sylvia Heaton, GLEAS, SWQD

American Electric Power
Cook Nuclear Plant
One Cook Place
Bridgman, MI 49106
616 465 5901

AEP
AMERICAN ELECTRIC POWER

Mr. Fred Morley
Surface Water Quality Division
Michigan Department of Environmental Quality
1342 SR89 West Suite B
Plainwell, MI 49080

January 25, 1999

Dear Mr. Morley:

Subject: NPDES Permit No. MI0005827 Application

We are currently preparing the Wastewater Discharge Permit Application to renew our current NPDES operating permit. As noted in Section III - Industrial and Commercial Wastewater, Part B. Outfall Information Item 6, paragraph 5 contains instructions to request permission to use a single sample for similar outfalls for application purposes.

We request that Outfall 001 be used as a representative sample for Outfalls 002 (Unit Two Noncontact Cooling Water) and Outfall 003 (De-icing Mode) for application use only. Outfalls 002 and 003 are substantially identical to Outfall 001. The source of these Outfalls is Lake Michigan; similar waste streams enter each Outfall prior to discharge.

In addition, we are requesting Outfall 00B (Unit Two Steam Generator Blowdown) to be used as a representative sample for Outfall 00A (Unit One Steam Generator Blowdown). Outfall 00A and Outfall 00B are substantially identical discharges, with the exception that Outfall 00A originates from the Unit One Steam Generators, and Outfall 00B originates from the Unit Two Steam Generators.

If you have any questions, please contact me at (616) 465-5901, ext. 1153.

Sincerely,

John P. Carlson
Environmental Compliance Manager

/tlm

c: Greg Danneffel - MDEQ Plainwell
Sylvia Heaton - MDEQ Lansing

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

D. E. Cooper
Plant Manager

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00B |

3. WASTEWATER CHARACTERISTICS - CONVENTIONAL POLLUTANTS - Instructions for completing this page are on the facing page

☒ Check this box if additional information is included as an attachment. To submit additional information see page ii, item 8

| Parameter | Maximum Daily Concentration | Maximum Monthly Concentration | Units | Number of Analyses | Sample Type |
|---|---|---|---|---|---|
| Biochemical Oxygen Demand - five day ($BOD_5$) | 82 | 82 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| COD (Chemical oxygen demand) | 331 | 331 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| TOC (Total organic carbon) | 19 9 | 19 9 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Ammonia Nitrogen (as N) | 43 4 | 43 4 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Total Suspended Solids | 1 | <4 | mg/l | 124 | ☒ Grab ☐ 24 Hr Comp |
| Total Dissolved Solids | NA | NA | mg/l | NA | ☐ Grab ☐ 24 Hr Comp |
| Total Phosphorus (as P) | <0 01 | <0 01 | mg/l | 1 | ☐ Grab ☒ 24 Hr Comp |
| Fecal Coliform Bacteria (report geometric means) | maximum-7day NA | NA | counts/100ml | NA | Grab |
| I Residual Chlorine | <0 08 | <0 08 | ☒ mg/l ☐ µg/l | 2 | Grab |
| Dissolved Oxygen | minimum daily 0 | ~~Do Not Use~~ | mg/l | 17 | ☒ Grab ☐ 24 Hr Comp |
| pH (report maximum and minimum of individual samples) | minimum 9.75 | maximum 10.28 | standard units | 34 | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Summer | * NA | NA | ☐ °F ☐ °C | NA | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Winter | * NA | NA | ☐ °F ☐ °C | NA | ☒ Grab ☐ 24 Hr Comp |
| Oil & Grease | <5 | <5 | mg/l | 1 | Grab |
| Hydrazine | 271 | 140 | mg/l | 53 | ☒ Grab ☐ 24 Hr Comp |
| Ethanolamine | 149 | 66 | mg/l | 1122 | ☒ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| See Attached for additional Data | | | | | ☐ Grab ☐ 24 Hr Comp |
| * NA - Internal Outfall | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00B |

4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all the pollutants identified in Table 3. Existing primary industries must also provide the results of at least one effluent analysis for any other chemical listed in Table 2 known or believed to be present in facility effluent.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3.

New primary industries that propose to discharge process wastewater must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

5. DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent, must submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6 All effluent analyses for dioxin and furan congeners must be conducted using EPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any dioxin and furan congener listed in Table 6.

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T); 2- (2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel), 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent must provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6

6. OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries, or existing primary industries that discharge non-process wastewater, must submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in facility effluent.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New secondary industries, or new primary industries that propose to discharge non-process wastewater, must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, must provide the results of at least one analyses for any chemical listed in Table 4 known or believed to be present in facility effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in facility effluent In addition, submit the results of any effluent analysis performed within the last 5 years for any chemical listed in Tables 4 and 5.

New industries, regardless of discharge type, must provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be in facility effluent

8. INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, must provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in facility effluent that have not been previously identified in this application Quantitative effluent data that are less than 5 years old for these chemicals must be reported

**NOTE:** All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on page 31. To submit additional information see page ii, item 8. If the effluent concentrations are estimated, place an E in the "Analytical Method" column The following fields must be completed for each data row: Parameter, CAS No, Concentration(s), Sample Type, Analytical Method, Quantification Level and Detection Level. See page ii, number 5 for analytical test requirements.

Michigan Department of Environmental Quality- Water Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00B |

| SAMPLE DATE → | | 1/25/01 | 9/1/01 | 9/3/01 | 9/20/01 | 1/29/02 | 2/15/02 | 2/23/02 | 5/14/02 | 5/29/02 | 8/3/02 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | CAS No. | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Sample Type | Analytical | QL | DL |
| Hyrazine | 7803578 | 206 | <3 | 188000 | 140100 | 140050 | 234525 | 8860 | 119 | <3 | 19 | Grab | D1385 | 3 | 10 |
| Date | | 2/16/01 | 2/17/01 | 2/18/01 | 8/29/01 | 8/30/01 | 9/5/01 | 9/9/01 | 9/13/01 | 9/20/01 | 9/27/01 | | | | |
| Ethanolamine | 141435 | 10580 | 12920 | 13170 | 6300 | 6740 | 94800 | 44100 | 45700 | 56700 | 51200 | Grab | 300.0 | 800 | 300 |
| See Attached | | | | | | | | | | | | | | | |
| for additional | | | | | | | | | | | | | | | |
| data. | | | | | | | | | | | | | | | |

Additional Sample Data
Summary Sheet



**For Outfall 00B**

| Parameter | 2/3/99 | 3/25/02 | Sample type | Max Daily | Analytical Method | Max monthly | # of Analyses |
|---|---|---|---|---|---|---|---|
| **Table 2** | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | |
| **Table 3** | | | | | | | |
| Antimony (ug/l) | <1 | <1 | Grab | <1 | 204.2/200.7 | <1 | 2 |
| Arsenic (ug/l) | <1 | <1 | Grab | <1 | 206 2/200.7 | <1 | 2 |
| Beryllium (ug/l) | <1 | <0 2 | Grab | <1 | 200 7 | <1 | 2 |
| Cadmium (ug/l) | <0 2 | <0 2 | Grab | <0.2 | 213 2/200.7 | <0 2 | 2 |
| Chromium (ug/l) | <10 | <2 | Grab | <10 | 200 7 | <10 | 2 |
| Copper (ug/l) | 7 | <1 | Grab | 7 | 220.2/200.7 | 7 | 2 |
| Lead (ug/l) | <1 | <1 | Grab | <1 | 239 2/200 7 | <1 | 2 |
| Nickel (ug/l) | <5 | <3 | Grab | <5 | 249 2/200 7 | <5 | 2 |
| Total Phenols (ug/l) | <10 | - | Grab | <10 | 420.1 | <10 | 1 |
| Selenium (ug/l) | - | <1 | Grab | <1 | 270 3 | <1 | 1 |
| Silver(ug/l) | <0 5 | <0 2 | Grab | <0 5 | 272 2/200 7 | <0 5 | 2 |
| Thallium -(ug/l) | <1 | <1 | Grab | <1 | 279 2 | <1 | 2 |
| Zinc (ug/l) | - | <4 | Grab | <4 | 200.7 | <4 | 1 |
| Cyanide (mg/l) | <0 01 | <0 01 | Grab | <0 01 | 335 2 | <0.01 | 2 |
| Mercury (ng/l) | ** | <0 5 | Grab | <0 5 | 1631 | <0 5 | 1 |
| **Table 4** | | | | | | | |
| Chlorine, total residual (mg/l) | <0 05 | <0 08 | Grab | <0 08 | 330 5 | <0.08 | 2 |
| Sulfate (mg/l) | <10 | <1 | Composite | <10 | 375 4 | <10 | 2 |
| **Additional Data From Belmonte Park Laboratories is attached** | | | | | | | |
| **See Attached Data set from Cook Nuclear Plant Laboratory** | | | | | | | |
| **Table 5** | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | |
| **See Attached Data set from Cook Nuclear Plant Laboratory** | | | | | | | |

Belmonte Park Environmental Laboratories

AMERICAN ELECTRIC POWER (AEP)
1 COOK PLACE
BRIDGMAN, MICHIGAN 49106

Attn: BLAIR ZORDELL

Purchase Order: 4307976
Invoice Number:

Order #: 99-02-232
Date: 03/16/99 09:23
Work ID: OUTFALL 00H - 00B (FAX)
Date Received: 02/03/99
Date Completed: 03/16/99

Client Code: AEP_4

ND= NONE DETECTED
OHIO CERT.# 12345

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | |
|---|---|---|
| 01 | OUTFALL 00H | 02/03/99 |
| 02 | OUTFALL 00H | 02/03/99 |
| 03 | OUTFALL 00H | 02/03/99 |
| 04 | OUTFALL 00H | 02/03/99 |
| 05 | OUTFALL 00H | 02/03/99 |
| 06 | OUTFALL 00H | 02/03/99 |
| 07 | OUTFALL 00H | 02/03/99 |
| 08 | OUTFALL 00H | 02/03/99 |
| 09 | OUTFALL 00H | 02/03/99 |
| 10 | OUTFALL 00H | 02/03/99 |
| 11 | OUTFALL 00H | 02/03/99 |
| 12 | OUTFALL 00H | 02/03/99 |
| 13 | OUTFALL 00H | 02/03/99 |
| 14 | OUTFALL 00H | 02/03/99 |
| 15 | OUTFALL 00H | 02/03/99 |

| Sample Number | Sample Description | |
|---|---|---|
| 16 | OUTFALL 00B | 02/03/99 |
| 17 | OUTFALL 00B | 02/03/99 |
| 18 | OUTFALL 00B | 02/03/99 |
| 19 | OUTFALL 00B | 02/03/99 |
| 20 | OUTFALL 00B | 02/03/99 |
| 21 | OUTFALL 00B | 02/03/99 |
| 22 | OUTFALL 00B | 02/03/99 |
| 23 | OUTFALL 00B | 02/03/99 |
| 24 | OUTFALL 00B | 02/03/99 |
| 25 | OUTFALL 00B | 02/03/99 |
| 26 | OUTFALL 00B | 02/03/99 |
| 27 | OUTFALL 00B | 02/03/99 |
| 28 | OUTFALL 00B | 02/03/99 |
| 29 | OUTFALL 00B | 02/03/99 |
| 30 | OUTFALL 00B | 02/03/99 |

Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Matt Lake. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

M. Lake

Certified By
MATT LAKE

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 01A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| 5day CBOD, | EPA 405.1 | 6 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, | EPA 160.2 | 15 | 5 | mg/L | 02/11/99 | KC |

**Sample: 02A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| COD, | EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, | EPA 415.1 | 2.0 | 1 | mg/L | 02/09/99 | JW |

**Sample: 03A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| AMMONIA N, | EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 05A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | | - | | - | | SD |
| EXTRACTION, | EPA 608 | - | | - | | SD |

**Sample: 06A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| ALUMINUM, | EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| ANTIMONY, | EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, | EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, | EPA 200.7 | 0.019 | 0.005 | mg/L | 02/13/99 | RJE |
| BERYLLIUM, | EPA 200.7 | BDL | 0.001 | mg/L | 02/13/99 | RJE |
| BORON, | EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| CADMIUM, | EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| COBALT, | EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| COPPER, | EPA 220.2 | 0.004 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, | EPA 200.7 | 0.3 | 0.1 | mg/L | 02/13/99 | RJE |
| LEAD, | EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| MAGNESIUM, | EPA 200.7 | 8 | 1 | mg/L | 02/15/99 | RJE |
| MANGANESE, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/13/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/15/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | 0.08 | 0.01 | mg/L | 02/15/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/13/99 | RJE |

**Sample: 07A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 08A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | 0.03 | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 09A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/04/99 | ML |

**Sample: 10A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.36 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | 0.52 | 0.5 | mg/L | 02/06/99 | JB |


11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 11A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/04/99 | PT |

**Sample: 12A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 13A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | 19 | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 14A OUTFALL 00H** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 16A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 82 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 17A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | 331 | 20 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | 19.9 | 1 | mg/L | 02/09/99 | JW |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 18A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | 43.4 | 0.5 | mg/L | 02/12/99 | JB |

**Sample: 20A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

**Sample: 21A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ALUMINUM, EPA 200.7 | 0.21 | 0.05 | mg/L | 02/15/99 | RJE |
| ANTIMONY, EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, EPA 200.7 | BDL | 0.005 | mg/L | 02/13/99 | RJE |
| BERYLLIUM, EPA 200.7 | BDL | 0.001 | mg/L | 02/13/99 | RJE |
| BORON, EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| CADMIUM, EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| COBALT, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| COPPER, EPA 220.2 | 0.007 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| LEAD, EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| MAGNESIUM, EPA 200.7 | BDL | 1 | mg/L | 02/15/99 | RJE |
| MANGANESE, EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| MERCURY, EPA 245.1 | BDL | 0.0002 | mg/L | 02/15/99 | RJE |
| METALS DIGESTION, WATER | - | | - | | EP |
| MOLYBDENUM, EPA 200.7 | 0.02 | 0.01 | mg/L | 02/13/99 | RJE |
| NICKEL, EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| SILVER, EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| THALLIUM, EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, EPA 200.7 | BDL | 0.02 | mg/L | 02/13/99 | RJE |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

**Sample: 22A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | 14 | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 23A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 24A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/04/99 | ML |

**Sample: 25A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | BDL | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | 10.3 | 0.5 | mg/L | 02/06/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | 53.7 | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 26A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| OIL & GREASE, | EPA 413.1 | BDL | 5 | mg/L | 02/04/99 | PT |

**Sample: 27A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| GROSS ALPHA, | IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, | IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

**Sample: 28A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 29A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 114 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 95 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 03/10/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020932
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 88 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 77 | 43 | - | 116 |
| p-TERPHENYL-d14 | 90 | 33 | - | 141 |
| PHENOL-d6 | 38 | 10 | - | 94 |
| 2-FLUOROPHENOL | 32 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 36 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022527
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT


11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 90 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 94 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020942
UNITS ug/L



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 15A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 105 | 35 - 114 |
| 2-FLUOROBIPHENYL | 120 Q | 43 - 116 |
| p-TERPHENYL-d14 | 125 | 33 - 141 |
| PHENOL-d6 | 40 | 10 - 94 |
| 2-FLUOROPHENOL | 53 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 150 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206505W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT


11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B
Test Description: EPA 624
Collected: 02/03/99

02/03/99 Lab No: 19A
Method: 624
Category: AQUEOUS

Test Code: 624_X

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 112 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 92 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020933
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 86 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 74 | 43 | - | 116 |
| p-TERPHENYL-d14 | 91 | 33 | - | 141 |
| PHENOL-d6 | 76 | 10 | - | 94 |
| 2-FLUOROPHENOL | 82 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 78 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/26/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022605
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 93 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 95 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020943
UNITS ug/L



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608
Collected: 02/03/99 Category: AQUEOUS

Test Code: 608

METHOD EPA 608
BDL BELOW DETECTION LIMIT


11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 30A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 80 | 35 - 114 |
| 2-FLUOROBIPHENYL | 80 | 43 - 116 |
| p-TERPHENYL-d14 | 73 | 33 - 141 |
| PHENOL-d6 | 10 | 10 - 94 |
| 2-FLUOROPHENOL | 4 Q | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 4 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST MN
INSTRUMENT SATURN
FILE ID 0206502W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

| Facility name: | NPDES Permit number: | Outfall Number: |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00B |

## Addendum to NPDES Renewal Application Section III.B.10
## Toxic Pollutant Reasonable Potential Effluent Data

Sampling results indicate the presence of toxic pollutants in the Cook Nuclear Plant discharges as follows:

Copper was detected in Outfall 00B (Unit 2 Steam Generator Blowdown). Based on knowledge of the plant processes, there is reasonable potential for copper to be present in these discharges.

Ethanolamine was detected in Outfall 00B (Unit Two Steam Generator Blowdown). Based on knowledge of the plant processes, there is reasonable potential for ethanolamine to be present in these discharges.

Additional Sample Data
(Cook Nuclear Lab)



| Date | Al (ug/l) | | Date | Al (ug/l) |
|---|---|---|---|---|
| 2/3/99 | 220 | | 1/19/02 | 11 3 |
| 8/30/01 | 4 26 | | 1/19/02 | 12 2 |
| 8/30/01 | 7.27 | | 1/19/02 | 13 3 |
| 8/30/01 | 13 6 | | 1/19/02 | 19 3 |
| 8/30/01 | 19 6 | | 1/19/02 | 16 3 |
| 8/30/01 | 15 7 | | 1/19/02 | 13 5 |
| 8/30/01 | 18 9 | | 1/19/02 | 16.2 |
| 8/30/01 | 16 9 | | 1/19/02 | 22.9 |
| 8/30/01 | 21 8 | | 1/19/02 | 17 5 |
| 8/30/01 | 17 4 | | 1/19/02 | 16 8 |
| 8/30/01 | 21 9 | | 1/19/02 | 20.1 |
| 8/30/01 | 28 | | 1/19/02 | 24 2 |
| 8/30/01 | 20.5 | | 1/19/02 | 19 4 |
| 8/30/01 | 18.7 | | 1/19/02 | 19 5 |
| 8/30/01 | 26 9 | | 1/19/02 | 19 8 |
| 8/30/01 | 23 5 | | 1/19/02 | 21.4 |
| 8/30/01 | 35.2 | | 1/19/02 | 16 6 |
| 8/30/01 | 29.1 | | 1/19/02 | 21.3 |
| 8/30/01 | 37 3 | | 1/19/02 | 21 9 |
| 8/30/01 | < 3 000 | | 1/19/02 | 20 8 |
| 8/30/01 | < 3 000 | | 1/19/02 | 18.7 |
| 8/30/01 | 37.8 | | 1/19/02 | 22 6 |
| 8/30/01 | 44 2 | | 1/19/02 | 26 8 |
| 8/31/01 | 43 2 | | 1/19/02 | 19 5 |
| 8/31/01 | 54 9 | | 1/19/02 | 22.6 |
| 8/31/01 | 36 8 | | 1/19/02 | 27.4 |
| 8/31/01 | 45 6 | | 1/19/02 | 37.5 |
| 8/31/01 | 34 9 | | 1/19/02 | 32 4 |
| 8/31/01 | 44.1 | | 1/19/02 | 42 9 |
| 1/17/02 | 13 7 | | 1/19/02 | 36 2 |
| 1/17/02 | 14 2 | | 1/19/02 | 43 |
| 1/17/02 | 12.4 | | 1/19/02 | 43 5 |
| 1/17/02 | 12 2 | | 1/19/02 | 53.1 |
| 1/18/02 | 10.9 | | 1/19/02 | 44 4 |
| 1/18/02 | 13 6 | | 1/19/02 | 49 3 |
| 1/18/02 | 13 4 | | 1/19/02 | 50 4 |
| 1/18/02 | 12 9 | | 1/19/02 | 62 4 |
| 1/19/02 | 11 9 | | 1/19/02 | 50 3 |
| 1/19/02 | 15.7 | | 1/19/02 | 51 8 |
| 1/19/02 | 14 3 | | 1/19/02 | 50.7 |
| 1/19/02 | 11 5 | | 1/19/02 | 61 6 |
| 1/19/02 | 13 5 | | 1/19/02 | 51.4 |
| 1/19/02 | 15 4 | | Max | 220 |
| 1/19/02 | 13 2 | | Max monthly | 220 |
| 1/19/02 | 13 2 | | Count | 87 |
| 1/19/02 | 14.7 | | Method | 200 7 |
| 1/19/02 | 14 5 | | | |

| | Date | Mn (ug/l) |
|---|---|---|
| | 8/30/01 | 1.65 |
| | 8/30/01 | 1.78 |
| | 8/30/01 | 2 07 |
| | 8/30/01 | 2.31 |
| | 8/30/01 | 2.41 |
| | 8/30/01 | 2.44 |
| | 8/30/01 | 1.11 |
| | 8/30/01 | 0.46 |
| | 8/30/01 | < 0.200 |
| | 8/30/01 | 0.39 |
| | 8/31/01 | 0.37 |
| | 8/31/01 | 2.26 |
| | 8/31/01 | 2.83 |
| | 1/17/02 | 0.42 |
| | 1/18/02 | 1.9 |
| | 1/19/02 | 1.8 |
| | 1/19/02 | 2.64 |
| | 1/19/02 | 2.77 |
| | 1/19/02 | 3.57 |
| | 1/19/02 | 2.34 |
| | 1/19/02 | 2.01 |
| | 1/19/02 | 2.37 |
| | 1/19/02 | 3.19 |
| | 1/19/02 | 5.34 |
| | 1/19/02 | 7.38 |
| | 1/19/02 | 3.91 |
| | 1/19/02 | 0.83 |
| | 1/19/02 | 2.11 |
| | | |
| | Max | 7.38 |
| | Max monthly | 2.3 |
| | Count | 28 |
| | Method | 200.7 |

Additional Sample Data
(Cook Nuclear Lab)



| Date | Mg (ug/l) | | Date | Mg (ug/l) |
|---|---|---|---|---|
| 1/22/01 | 0.7 | | 1/19/02 | 1.7 |
| 1/22/01 | 0.6 | | 1/19/02 | 3.2 |
| 1/23/01 | 1.5 | | 1/19/02 | 1.6 |
| 1/23/01 | 2.9 | | 1/19/02 | 1.4 |
| 1/23/01 | 3.1 | | 1/19/02 | 1.5 |
| 1/23/01 | 3.3 | | 1/19/02 | 3.1 |
| 1/23/01 | 3 4 | | 1/19/02 | 8.7 |
| 1/23/01 | 3.4 | | 1/19/02 | 16.2 |
| 1/23/01 | 3.7 | | 1/19/02 | 10 2 |
| 1/23/01 | 3.7 | | 1/19/02 | 3.9 |
| 1/23/01 | 4 | | 1/19/02 | 5 4 |
| 1/23/01 | 4 | | | |
| 8/30/01 | 0.5 | | Max | 16.2 |
| 8/30/01 | 0.7 | | Max monthly | 4.1 |
| 8/30/01 | 0.8 | | Count | 40 |
| 8/30/01 | 0.9 | | Method | 200.7 |
| 8/30/01 | 0.9 | | | |
| 8/30/01 | 0.9 | | | |
| 8/30/01 | 0.4 | | | |
| 8/30/01 | < 0.2 | | | |
| 8/30/01 | < 0.2 | | | |
| 8/30/01 | < 0.2 | | | |
| 8/31/01 | < 0.2 | | | |
| 8/31/01 | 1.1 | | | |
| 8/31/01 | 1.7 | | | |
| 1/17/02 | 0.4 | | | |
| 1/18/02 | 0.9 | | | |
| 1/19/02 | 0.9 | | | |
| 1/19/02 | 2 | | | |

Non-routine sample data
(Cook Nuclear Lab)



| Date | Hydrazine ug/L |
|---|---|
| 1/25/01 | 206 |
| 1/26/01 | 275 |
| 8/30/01 | 310 |
| 8/31/01 | < 3 |
| 9/1/01 | < 3 |
| 9/1/01 | 10085 |
| 9/2/01 | 18000 |
| 9/2/01 | 92658 |
| 9/2/01 | 59871 |
| 9/2/01 | 57710 |
| 9/3/01 | 188000 |
| 9/5/01 | 227626 |
| 9/7/01 | 158310 |
| 9/8/01 | 158220 |
| 9/13/01 | 164277 |
| 9/20/01 | 140100 |
| 9/27/01 | 155939 |
| 1/18/02 | 42 |
| 1/20/02 | 80582 |
| 1/24/02 | 125000 |
| 1/29/02 | 140050 |
| 1/31/02 | 99373 |
| 2/8/02 | 175116 |
| 2/9/02 | 263222 |
| 2/13/02 | 270837 |
| 2/15/02 | 234525 |
| 2/16/02 | 162647 |
| 2/21/02 | 113104 |
| 2/22/02 | 175000 |
| 2/23/02 | 8860 |
| 2/23/02 | 267 |
| 2/24/02 | 184 |
| 2/25/02 | < 3 |
| 2/26/02 | < 3 |
| 5/13/02 | 636 |
| 5/14/02 | 119 |
| 5/15/02 | 1249 |
| 5/26/02 | 1558 |
| 5/27/02 | 1285 |
| 5/28/02 | 1870 |
| 5/29/02 | < 3 |
| 5/30/02 | 719 |
| 5/31/02 | 1010 |
| 6/1/02 | 2740 |
| 6/2/02 | 555 |
| 7/22/02 | < 3 |
| 7/28/02 | 16437 |
| 7/29/02 | 50213 |
| 7/30/02 | 14200 |
| 7/31/02 | 22019 |
| 8/1/02 | 13500 |
| 8/2/02 | 620 |
| 8/3/02 | 19 |

| | |
|---|---|
| Max | 270837 |
| Monthly Max | 140376 |
| Count | 53 |
| Method: ASTM D 1385 | |
| QL: 3 ug/l | |
| DL: 10 ug/l | |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00B Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1/2/01 | 21.26 | 1/14/01 | 11.6 | 1/25/01 | 4.39 | 2/6/01 | 14 7 | 2/17/01 | 12.92 | 2/28/01 |
| 1/2/01 | 22.33 | 1/14/01 | 11.3 | 1/26/01 | 4.1 | 2/6/01 | 14 46 | 2/17/01 | 12.73 | 2/28/01 |
| 1/2/01 | 23 27 | 1/15/01 | 10.7 | 1/26/01 | 1.22 | 2/6/01 | 14 29 | 2/17/01 | 12 92 | 3/1/01 |
| 1/2/01 | 22 31 | 1/15/01 | 10 7 | 1/26/01 | 3.76 | 2/6/01 | 14 59 | 2/18/01 | 13 17 | 3/1/01 |
| 1/3/01 | 27.7 | 1/15/01 | 10 7 | 1/26/01 | 4 8 | 2/7/01 | 12.75 | 2/18/01 | 13 41 | 3/1/01 |
| 1/3/01 | 27 6 | 1/15/01 | 10 7 | 1/27/01 | 3 1 | 2/7/01 | 13.04 | 2/18/01 | 13.1 | 3/1/01 |
| 1/3/01 | 27.6 | 1/16/01 | 12 | 1/27/01 | 2 2 | 2/7/01 | 12.74 | 2/18/01 | 13.06 | 3/2/01 |
| 1/3/01 | 28.4 | 1/16/01 | 12.1 | 1/27/01 | 3.7 | 2/7/01 | 12 75 | 2/19/01 | 13.1 | 3/2/01 |
| 1/4/01 | 10.16 | 1/16/01 | 11.9 | 1/27/01 | 3 6 | 2/8/01 | 15.3 | 2/19/01 | 13.3 | 3/2/01 |
| 1/4/01 | 10.4 | 1/16/01 | 12 | 1/28/01 | 3 36 | 2/8/01 | 16 2 | 2/19/01 | 13 | 3/2/01 |
| 1/5/01 | 8.76 | 1/17/01 | 12 3 | 1/28/01 | 3 23 | 2/8/01 | 15 9 | 2/19/01 | 13 | 3/3/01 |
| 1/5/01 | 8.26 | 1/17/01 | 12 4 | 1/28/01 | 3 33 | 2/8/01 | 15 8 | 2/20/01 | 14.3 | 3/3/01 |
| 1/5/01 | 9.14 | 1/17/01 | 12.2 | 1/28/01 | 3 33 | 2/9/01 | 17.14 | 2/20/01 | 14.5 | 3/3/01 |
| 1/5/01 | 9.1 | 1/17/01 | 12.2 | 1/29/01 | 6 98 | 2/9/01 | 17 03 | 2/20/01 | 14.1 | 3/3/01 |
| 1/7/01 | 7.41 | 1/18/01 | 14.7 | 1/29/01 | 6 72 | 2/9/01 | 16 73 | 2/20/01 | 14.1 | 3/4/01 |
| 1/7/01 | 7.46 | 1/18/01 | 14.6 | 1/29/01 | 6 57 | 2/9/01 | 16 28 | 2/21/01 | 12 4 | 3/4/01 |
| 1/7/01 | 7.31 | 1/18/01 | 14.3 | 1/29/01 | 6.71 | 2/10/01 | 13.7 | 2/21/01 | 11.34 | 3/4/01 |
| 1/7/01 | 7.31 | 1/18/01 | 14 5 | 1/30/01 | 12 | 2/10/01 | 14.1 | 2/21/01 | 12.29 | 3/4/01 |
| 1/8/01 | 7.76 | 1/19/01 | 15.1 | 1/30/01 | 11.5 | 2/10/01 | 14 4 | 2/21/01 | 12.31 | 3/5/01 |
| 1/8/01 | 8 02 | 1/19/01 | 14 8 | 1/30/01 | 11.2 | 2/10/01 | 14.3 | 2/22/01 | 14.2 | 3/5/01 |
| 1/8/01 | 7 95 | 1/19/01 | 14.5 | 1/30/01 | 10 9 | 2/11/01 | 13.1 | 2/22/01 | 14.3 | 3/5/01 |
| 1/8/01 | 7.88 | 1/19/01 | 14 5 | 1/31/01 | 21 6 | 2/11/01 | 13 3 | 2/22/01 | 14.1 | 3/5/01 |
| 1/9/01 | 9 93 | 1/20/01 | 15 9 | 1/31/01 | 22.1 | 2/11/01 | 13.2 | 2/22/01 | 14 | 3/6/01 |
| 1/9/01 | 10.12 | 1/20/01 | 16.2 | 1/31/01 | 21.2 | 2/11/01 | 13.1 | 2/23/01 | 13.32 | 3/6/01 |
| 1/9/01 | 10.13 | 1/20/01 | 16 | 1/31/01 | 21.3 | 2/12/01 | 11.19 | 2/23/01 | 13 63 | 3/6/01 |
| 1/9/01 | 10 2 | 1/20/01 | 15.9 | 2/1/01 | 8.73 | 2/12/01 | 11.56 | 2/23/01 | 13.37 | 3/6/01 |
| 1/10/01 | 10.24 | 1/21/01 | 13.9 | 2/1/01 | 9.55 | 2/12/01 | 11.38 | 2/23/01 | 13 43 | 3/7/01 |
| 1/10/01 | 10.75 | 1/21/01 | 14.3 | 2/1/01 | 9.48 | 2/12/01 | 11.37 | 2/24/01 | 12 933 | 3/7/01 |
| 1/10/01 | 10.28 | 1/21/01 | 14 | 2/1/01 | 9 48 | 2/13/01 | 10.7 | 2/24/01 | 13.077 | 3/7/01 |
| 1/10/01 | 10 27 | 1/21/01 | 15 9 | 2/2/01 | 7.3 | 2/13/01 | 11 | 2/24/01 | 12.853 | 3/7/01 |
| 1/11/01 | 10 59 | 1/22/01 | 13 5 | 2/2/01 | 7.4 | 2/13/01 | 10 9 | 2/24/01 | 12.991 | 3/8/01 |
| 1/11/01 | 10 77 | 1/22/01 | 13 8 | 2/2/01 | 7 2 | 2/13/01 | 10 9 | 2/25/01 | 11 004 | 3/8/01 |
| 1/11/01 | 10 66 | 1/22/01 | 13.5 | 2/2/01 | 7.3 | 2/14/01 | 11.2 | 2/25/01 | 10.785 | 3/8/01 |
| 1/11/01 | 10 76 | 1/22/01 | 13.5 | 2/3/01 | 10.2 | 2/14/01 | 11.4 | 2/25/01 | 10 877 | 3/8/01 |
| 1/11/01 | 13.31 | 1/23/01 | 9.68 | 2/3/01 | 9.9 | 2/14/01 | 11.2 | 2/25/01 | 10.86 | 3/9/01 |
| 1/12/01 | 16.2 | 1/23/01 | 9.64 | 2/3/01 | 9 66 | 2/14/01 | 11 2 | 2/26/01 | 11.9 | 3/9/01 |
| 1/12/01 | 16.86 | 1/23/01 | 9.73 | 2/3/01 | 9.53 | 2/15/01 | 12 3 | 2/26/01 | 12.182 | 3/9/01 |
| 1/12/01 | 16.36 | 1/23/01 | 9.45 | 2/4/01 | 11.5 | 2/15/01 | 12.4 | 2/26/01 | 11.921 | 3/9/01 |
| 1/12/01 | 16.56 | 1/24/01 | 3 01 | 2/4/01 | 11.5 | 2/15/01 | 12.1 | 2/26/01 | 11.901 | 3/10/01 |
| 1/13/01 | 12 47 | 1/24/01 | 3.42 | 2/4/01 | 11.4 | 2/15/01 | 12 | 2/27/01 | 12 87 | 3/10/01 |
| 1/13/01 | 12 86 | 1/24/01 | 2 81 | 2/4/01 | 11.2 | 2/16/01 | 10 58 | 2/27/01 | 13 4 | 3/10/01 |
| 1/13/01 | 12.86 | 1/24/01 | 3 86 | 2/5/01 | 13.86 | 2/16/01 | 10 85 | 2/27/01 | 13 1 | 3/10/01 |
| 1/13/01 | 12.93 | 1/25/01 | 2 96 | 2/5/01 | 14.2 | 2/16/01 | 10 82 | 2/27/01 | 13 07 | 3/11/01 |
| 1/14/01 | 12.1 | 1/25/01 | 2 5 | 2/5/01 | 13.7 | 2/16/01 | 10 34 | 2/28/01 | 14.07 | 3/11/01 |
| 1/14/01 | 11.7 | 1/25/01 | 2 98 | 2/5/01 | 13 64 | 2/17/01 | 12 88 | 2/28/01 | 14.27 | 3/11/01 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00B Ethanolamine
Method 300.0

| Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|---|---|---|
| 14 01 | 3/11/01 | 12.8 | 3/23/01 | 12.5 | 4/3/01 | 6.52 | 4/14/01 | 3.154 | 4/25/01 | 9.71 |
| 14.09 | 3/12/01 | 11.96 | 3/23/01 | 12 7 | 4/3/01 | 6.51 | 4/14/01 | 3.185 | 4/26/01 | 7.92 |
| 15.5 | 3/12/01 | 12.41 | 3/23/01 | 12 3 | 4/3/01 | 6 6 | 4/15/01 | 4.391 | 4/26/01 | 8.12 |
| 15.75 | 3/12/01 | 12 31 | 3/23/01 | 12 4 | 4/4/01 | 8.59 | 4/15/01 | 14 047 | 4/26/01 | 7.5 |
| 15.48 | 3/12/01 | 12 13 | 3/24/01 | 12.96 | 4/4/01 | 8.06 | 4/15/01 | 11 253 | 4/26/01 | 8.08 |
| 15.39 | 3/13/01 | 7.604 | 3/24/01 | 12.93 | 4/4/01 | 8.74 | 4/15/01 | 7.664 | 4/27/01 | 6.97 |
| 14 | 3/13/01 | 7.971 | 3/24/01 | 12.74 | 4/4/01 | 8 67 | 4/16/01 | 8.68 | 4/27/01 | 5.44 |
| 14 | 3/13/01 | 7.42 | 3/24/01 | 12.92 | 4/5/01 | 9 09 | 4/16/01 | 5.574 | 4/27/01 | 6.89 |
| 13 8 | 3/13/01 | 7.42 | 3/25/01 | 13.55 | 4/5/01 | 9.18 | 4/16/01 | 8.252 | 4/27/01 | 7.12 |
| 13.9 | 3/14/01 | 8.136 | 3/25/01 | 13.39 | 4/5/01 | 8.8 | 4/16/01 | 8.621 | 4/28/01 | 8.73 |
| 13.8 | 3/14/01 | 8 153 | 3/25/01 | 13.07 | 4/5/01 | 8 93 | 4/17/01 | 6.51 | 4/28/01 | 8 99 |
| 14.1 | 3/14/01 | 8 039 | 3/25/01 | 13.25 | 4/6/01 | 11 4 | 4/17/01 | 8.63 | 4/28/01 | 8 73 |
| 13.6 | 3/14/01 | 8.025 | 3/26/01 | 14.39 | 4/6/01 | 11.3 | 4/17/01 | 9.46 | 4/28/01 | 8.79 |
| 13.6 | 3/15/01 | 10.3 | 3/26/01 | 14.61 | 4/6/01 | 11.2 | 4/17/01 | 9.21 | 4/29/01 | 11.34 |
| 12.36 | 3/15/01 | 10 39 | 3/26/01 | 14.5 | 4/6/01 | 11 2 | 4/18/01 | 9 62 | 4/29/01 | 11.47 |
| 12.69 | 3/15/01 | 10 15 | 3/26/01 | 14.35 | 4/7/01 | 11.3 | 4/18/01 | 9 84 | 4/29/01 | 11.43 |
| 12.59 | 3/15/01 | 10 11 | 3/27/01 | 13.5 | 4/7/01 | 11 3 | 4/18/01 | 9.67 | 4/29/01 | 11.48 |
| 12.62 | 3/16/01 | 11.65 | 3/27/01 | 13.5 | 4/7/01 | 11 6 | 4/18/01 | 9.66 | 4/30/01 | 12 3 |
| 14 | 3/16/01 | 11.92 | 3/27/01 | 13.8 | 4/7/01 | 11 4 | 4/19/01 | 11.01 | 4/30/01 | 12 28 |
| 14.5 | 3/16/01 | 11.82 | 3/27/01 | 13.5 | 4/8/01 | 8.592 | 4/19/01 | 11.47 | 4/30/01 | 11.94 |
| 14.4 | 3/16/01 | 11.84 | 3/28/01 | 13 5 | 4/8/01 | 8 884 | 4/19/01 | 11.28 | 4/30/01 | 11.68 |
| 14.1 | 3/17/01 | 12.6 | 3/28/01 | 13 8 | 4/8/01 | 8 62 | 4/19/01 | 11.15 | 5/1/01 | 13.7 |
| 12.98 | 3/17/01 | 13 | 3/28/01 | 13 5 | 4/8/01 | 8 79 | 4/20/01 | 15.89 | 5/1/01 | 13.7 |
| 13 28 | 3/17/01 | 12.72 | 3/28/01 | 13 6 | 4/9/01 | 9 689 | 4/20/01 | 16.07 | 5/1/01 | 13 7 |
| 13 05 | 3/17/01 | 12.95 | 3/29/01 | 12.85 | 4/9/01 | 9.9 | 4/20/01 | 15 86 | 5/1/01 | 13 8 |
| 13 08 | 3/18/01 | 14.83 | 3/29/01 | 13.72 | 4/9/01 | 9.7 | 4/20/01 | 16.06 | 5/2/01 | 14.65 |
| 12.19 | 3/18/01 | 14.94 | 3/29/01 | 13.56 | 4/9/01 | 9 67 | 4/21/01 | 16.7 | 5/2/01 | 14.75 |
| 12.38 | 3/18/01 | 14.78 | 3/29/01 | 13 53 | 4/10/01 | 12.95 | 4/21/01 | 17 | 5/2/01 | 14.45 |
| 12.38 | 3/18/01 | 14.65 | 3/30/01 | 12 422 | 4/10/01 | 13.22 | 4/21/01 | 16 7 | 5/2/01 | 14.37 |
| 12.25 | 3/19/01 | 13.22 | 3/30/01 | 13.116 | 4/10/01 | 12.44 | 4/21/01 | 16 7 | 5/3/01 | 15.09 |
| 13 5 | 3/19/01 | 13.65 | 3/30/01 | 13 044 | 4/10/01 | 13 09 | 4/22/01 | 14.21 | 5/3/01 | 15.04 |
| 13.8 | 3/19/01 | 13 69 | 3/30/01 | 12.91 | 4/11/01 | 12.68 | 4/22/01 | 14 28 | 5/3/01 | 15.03 |
| 13 5 | 3/19/01 | 13 49 | 3/31/01 | 12.859 | 4/11/01 | 12 67 | 4/22/01 | 13.78 | 5/3/01 | 14.95 |
| 13.5 | 3/20/01 | 13.193 | 3/31/01 | 12 825 | 4/11/01 | 12.36 | 4/22/01 | 14.24 | 5/4/01 | 14.662 |
| 13.4 | 3/20/01 | 13 4 | 3/31/01 | 12 977 | 4/11/01 | 13 04 | 4/23/01 | 11 82 | 5/4/01 | 15 014 |
| 13 6 | 3/20/01 | 13 3 | 3/31/01 | 13 041 | 4/12/01 | 18 6 | 4/23/01 | 11.98 | 5/4/01 | 14.554 |
| 13.2 | 3/20/01 | 13 39 | 4/1/01 | 13.713 | 4/12/01 | 18 4 | 4/23/01 | 11.74 | 5/4/01 | 14.698 |
| 13.4 | 3/21/01 | 12.1 | 4/1/01 | 14.137 | 4/12/01 | 18 4 | 4/23/01 | 10.73 | 5/5/01 | 7.636 |
| 13.3 | 3/21/01 | 12 6 | 4/1/01 | 13.906 | 4/12/01 | 17 4 | 4/24/01 | 10.5 | 5/5/01 | 7.653 |
| 13.4 | 3/21/01 | 12 6 | 4/1/01 | 14.23 | 4/13/01 | 6 07 | 4/24/01 | 10.2 | 5/5/01 | 7.569 |
| 13.1 | 3/21/01 | 12 5 | 4/2/01 | 7.931 | 4/13/01 | 6 04 | 4/24/01 | 10.1 | 5/5/01 | 7 66 |
| 13 | 3/22/01 | 12.184 | 4/2/01 | 8 215 | 4/13/01 | 5 99 | 4/24/01 | 10.3 | 5/6/01 | 4.175 |
| 12.4 | 3/22/01 | 12.594 | 4/2/01 | 7.89 | 4/13/01 | 5.77 | 4/25/01 | 9.34 | 5/6/01 | 4.349 |
| 12.9 | 3/22/01 | 12.42 | 4/2/01 | 8 205 | 4/14/01 | 3.053 | 4/25/01 | 9 57 | 5/6/01 | 4 288 |
| 12.6 | 3/22/01 | 12.554 | 4/3/01 | 6.48 | 4/14/01 | 3 352 | 4/25/01 | 9.48 | 5/6/01 | 4.324 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00B Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 5/6/01 | 1.5 | 5/19/01 | 9 62 | 5/30/01 | 12 04 | 6/10/01 | 8.95 | 6/22/01 | 11 61 | 7/7/01 |
| 5/7/01 | 6 67 | 5/19/01 | 9 84 | 5/30/01 | 12 05 | 6/10/01 | 8.92 | 6/22/01 | 11.77 | 7/8/01 |
| 5/7/01 | 6 34 | 5/19/01 | 9 68 | 5/30/01 | 11.96 | 6/11/01 | 10 4 | 6/22/01 | 12.06 | 7/8/01 |
| 5/7/01 | 6.37 | 5/19/01 | 9.61 | 5/31/01 | 12.73 | 6/11/01 | 10 62 | 6/23/01 | 10 8 | 7/9/01 |
| 5/7/01 | 6.54 | 5/20/01 | 8 59 | 5/31/01 | 13.03 | 6/11/01 | 10.31 | 6/23/01 | 10.73 | 7/9/01 |
| 5/8/01 | 7.97 | 5/20/01 | 8 63 | 5/31/01 | 12.74 | 6/11/01 | 10 31 | 6/23/01 | 10.83 | 7/10/01 |
| 5/8/01 | 8.1 | 5/20/01 | 8 78 | 5/31/01 | 12.85 | 6/12/01 | 11 | 6/24/01 | 10.64 | 7/10/01 |
| 5/8/01 | 7.94 | 5/20/01 | 8 51 | 6/1/01 | 12.21 | 6/12/01 | 10 96 | 6/24/01 | 10.36 | 7/11/01 |
| 5/8/01 | 7.75 | 5/21/01 | 7 59 | 6/1/01 | 12.19 | 6/12/01 | 10 93 | 6/24/01 | 10 45 | 7/11/01 |
| 5/9/01 | 8 54 | 5/21/01 | 7.72 | 6/1/01 | 12 11 | 6/12/01 | 11.12 | 6/25/01 | 11 | 7/12/01 |
| 5/9/01 | 8.47 | 5/21/01 | 7.89 | 6/1/01 | 12 28 | 6/13/01 | 10 82 | 6/25/01 | 11 | 7/12/01 |
| 5/9/01 | 8 41 | 5/21/01 | 7.62 | 6/2/01 | 11 49 | 6/13/01 | 11 04 | 6/25/01 | 11.3 | 7/13/01 |
| 5/9/01 | 8 32 | 5/22/01 | 5 98 | 6/2/01 | 11.85 | 6/13/01 | 10 86 | 6/26/01 | 11.6 | 7/13/01 |
| 5/10/01 | 8.1 | 5/22/01 | 6 13 | 6/2/01 | 11.74 | 6/13/01 | 10 9 | 6/26/01 | 11.4 | 7/13/01 |
| 5/10/01 | 8.19 | 5/22/01 | 5 85 | 6/2/01 | 11.93 | 6/14/01 | 11.7 | 6/26/01 | 11.55 | 7/14/01 |
| 5/10/01 | 7.92 | 5/22/01 | 5 87 | 6/3/01 | 8 33 | 6/14/01 | 11.4 | 6/27/01 | 12 05 | 7/14/01 |
| 5/10/01 | 7.96 | 5/23/01 | 6 98 | 6/3/01 | 8 45 | 6/14/01 | 11.7 | 6/27/01 | 11.95 | 7/14/01 |
| 5/11/01 | 8.1 | 5/23/01 | 7 06 | 6/3/01 | 8 37 | 6/14/01 | 11.7 | 6/27/01 | 11.94 | 7/15/01 |
| 5/11/01 | 8.25 | 5/23/01 | 6.91 | 6/3/01 | 8 52 | 6/15/01 | 13.3 | 6/28/01 | 12 02 | 7/15/01 |
| 5/11/01 | 7.87 | 5/23/01 | 6 95 | 6/4/01 | 8 03 | 6/15/01 | 13 4 | 6/28/01 | 11.91 | 7/15/01 |
| 5/11/01 | 7.93 | 5/24/01 | 7.25 | 6/4/01 | 8.19 | 6/15/01 | 13 2 | 6/28/01 | 11.98 | 7/16/01 |
| 5/12/01 | 9.36 | 5/24/01 | 6 84 | 6/4/01 | 8 03 | 6/15/01 | 13 | 6/29/01 | 11.56 | 7/16/01 |
| 5/12/01 | 9.18 | 5/24/01 | 7 43 | 6/4/01 | 8.12 | 6/16/01 | 12.48 | 6/29/01 | 11 47 | 7/16/01 |
| 5/12/01 | 9 32 | 5/24/01 | 7.29 | 6/5/01 | 7.95 | 6/16/01 | 12.32 | 6/29/01 | 11.3 | 7/17/01 |
| 5/12/01 | 9 09 | 5/25/01 | 8 58 | 6/5/01 | 8.15 | 6/16/01 | 12.46 | 6/30/01 | 12 2 | 7/17/01 |
| 5/13/01 | 10.18 | 5/25/01 | 8.71 | 6/5/01 | 7.78 | 6/16/01 | 12.46 | 6/30/01 | 12 08 | 7/17/01 |
| 5/13/01 | 10.46 | 5/25/01 | 8 82 | 6/5/01 | 8 01 | 6/17/01 | 12.4 | 6/30/01 | 12 | 7/18/01 |
| 5/13/01 | 10.37 | 5/25/01 | 8.79 | 6/6/01 | 7 82 | 6/17/01 | 12.3 | 7/1/01 | 8 58 | 7/18/01 |
| 5/13/01 | 10.37 | 5/26/01 | 9 51 | 6/6/01 | 8 17 | 6/17/01 | 12.3 | 7/1/01 | 8 65 | 7/18/01 |
| 5/15/01 | 16.66 | 5/26/01 | 9.74 | 6/6/01 | 8.17 | 6/17/01 | 12 4 | 7/1/01 | 8 82 | 7/19/01 |
| 5/15/01 | 16 79 | 5/26/01 | 9.67 | 6/6/01 | 8.18 | 6/18/01 | 12.52 | 7/2/01 | 7.36 | 7/19/01 |
| 5/15/01 | 16.72 | 5/26/01 | 9.89 | 6/7/01 | 8.94 | 6/18/01 | 12.59 | 7/2/01 | 7.51 | 7/19/01 |
| 5/15/01 | 16 84 | 5/27/01 | 11.1 | 6/7/01 | 8.75 | 6/18/01 | 12 31 | 7/2/01 | 7.58 | 7/20/01 |
| 5/16/01 | 20 | 5/27/01 | 11 4 | 6/7/01 | 8 84 | 6/18/01 | 12.32 | 7/3/01 | 7.57 | 7/20/01 |
| 5/16/01 | 20.4 | 5/27/01 | 10 9 | 6/7/01 | 8.68 | 6/19/01 | 12.34 | 7/3/01 | 7.52 | 7/20/01 |
| 5/16/01 | 19 9 | 5/27/01 | 10 8 | 6/8/01 | 8.75 | 6/19/01 | 12 58 | 7/3/01 | 7.4 | 7/20/01 |
| 5/16/01 | 20 | 5/28/01 | 10.76 | 6/8/01 | 8.83 | 6/19/01 | 12.18 | 7/4/01 | 10 22 | 7/21/01 |
| 5/17/01 | 14.15 | 5/28/01 | 11.12 | 6/8/01 | 8.77 | 6/19/01 | 12.1 | 7/4/01 | 9.76 | 7/21/01 |
| 5/17/01 | 14 51 | 5/28/01 | 10.8 | 6/8/01 | 8.69 | 6/20/01 | 11.76 | 7/4/01 | 9.31 | 7/21/01 |
| 5/17/01 | 14.19 | 5/28/01 | 10 68 | 6/9/01 | 8.15 | 6/20/01 | 12.3 | 7/5/01 | 13.1 | 7/21/01 |
| 5/17/01 | 14.4 | 5/29/01 | 10 89 | 6/9/01 | 8 22 | 6/20/01 | 12 01 | 7/5/01 | 13.1 | 7/22/01 |
| 5/18/01 | 7.95 | 5/29/01 | 11 01 | 6/9/01 | 8 07 | 6/20/01 | 12.15 | 7/5/01 | 13 | 7/22/01 |
| 5/18/01 | 7.89 | 5/29/01 | 10.8 | 6/9/01 | 8 09 | 6/21/01 | 11 99 | 7/6/01 | 13 05 | 7/22/01 |
| 5/18/01 | 7.98 | 5/29/01 | 10.78 | 6/10/01 | 8.67 | 6/21/01 | 11 82 | 7/6/01 | 13.05 | 7/22/01 |
| 5/18/01 | 7.95 | 5/30/01 | 11.91 | 6/10/01 | 8.97 | 6/21/01 | 12 | 7/7/01 | 9.18 | 7/23/01 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00B Ethanolamine
Method 300.0

| Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|---|---|---|---|---|
| 8.92 | 7/23/01 | 12.24 | 8/3/01 | 13 | 8/29/01 | 6.26 | 9/9/01 | 44.1 | 2/2/02 | 18.8 |
| 6.99 | 7/23/01 | 12.13 | 8/3/01 | 13 | 8/30/01 | 6.74 | 9/9/01 | 53 | 2/2/02 | 20.2 |
| 7.03 | 7/23/01 | 12.18 | 8/4/01 | 13 | 8/30/01 | 6.6 | 9/13/01 | 45.7 | 2/8/02 | 44.6 |
| 4 52 | 7/24/01 | 12.98 | 8/4/01 | 13.2 | 8/30/01 | 6.69 | 9/13/01 | 38.7 | 2/8/02 | 39.4 |
| 4.463 | 7/24/01 | 13.16 | 8/4/01 | 13.1 | 8/31/01 | 16.19 | 9/13/01 | 48.7 | 2/9/02 | 78.2 |
| 3.67 | 7/24/01 | 13 | 8/4/01 | 13.1 | 8/31/01 | 41.78 | 9/13/01 | 38 6 | 2/10/02 | 31.8 |
| 3.61 | 7/24/01 | 13.03 | 8/5/01 | 12.86 | 8/31/01 | 18 95 | 9/20/01 | 56 7 | 2/10/02 | 34.2 |
| 4.19 | 7/25/01 | 12.78 | 8/5/01 | 13.02 | 8/31/01 | 20 76 | 9/20/01 | 42.9 | 2/10/02 | 35 |
| 4.16 | 7/25/01 | 12.99 | 8/5/01 | 13 | 9/1/01 | 2 77 | 9/20/01 | 48.6 | 2/13/02 | 81 6 |
| 4.74 | 7/25/01 | 12 82 | 8/5/01 | 12 9 | 9/1/01 | 6 07 | 9/27/01 | 51 2 | 2/13/02 | 41 9 |
| 4.64 | 7/25/01 | 12.97 | 8/6/01 | 12 22 | 9/1/01 | 2 33 | 9/27/01 | 46.8 | 2/13/02 | 42.8 |
| 6.176 | 7/26/01 | 12 79 | 8/6/01 | 12.58 | 9/1/01 | 3 29 | 9/27/01 | 54.1 | 2/13/02 | 38.7 |
| 6.17 | 7/26/01 | 13.11 | 8/6/01 | 12.16 | 9/1/01 | 8.8 | 1/2/02 | 13 2 | 2/15/02 | 64 |
| 6.18 | 7/26/01 | 12.8 | 8/6/01 | 12.11 | 9/1/01 | 35.2 | 1/2/02 | 13.7 | 2/15/02 | 37.8 |
| 7.68 | 7/26/01 | 12.82 | 8/7/01 | 10.73 | 9/1/01 | 30.1 | 1/2/02 | 13 2 | 2/15/02 | 39 2 |
| 7.61 | 7/27/01 | 12.34 | 8/7/01 | 10.84 | 9/1/01 | 26 4 | 1/2/02 | 13 | 2/15/02 | 33.8 |
| 7.62 | 7/27/01 | 12.33 | 8/7/01 | 10.72 | 9/2/01 | 18 6 | 1/9/02 | 8 89 | 2/16/02 | 34.4 |
| 9.58 | 7/27/01 | 12.41 | 8/7/01 | 10.72 | 9/2/01 | 88 | 1/9/02 | 8 63 | 2/21/02 | < 11.000 |
| 9.8 | 7/27/01 | 12.57 | 8/8/01 | 10.59 | 9/2/01 | 74.7 | 1/9/02 | 8 64 | 2/21/02 | 9.14 |
| 9.85 | 7/28/01 | 11.6 | 8/8/01 | 10.54 | 9/2/01 | 57.9 | 1/9/02 | 8 57 | 2/21/02 | 9 32 |
| 11.6 | 7/28/01 | 11.7 | 8/10/01 | 10.9 | 9/2/01 | 48.8 | 1/16/02 | 13 | 2/21/02 | 14.6 |
| 11.57 | 7/28/01 | 11.5 | 8/10/01 | 11 | 9/2/01 | 149 | 1/16/02 | 13 | 2/23/02 | 9.13 |
| 11.6 | 7/28/01 | 11.7 | 8/10/01 | 10.8 | 9/2/01 | 129 | 1/16/02 | 12 8 | 2/23/02 | 11 |
| 6.09 | 7/29/01 | 12.4 | 8/10/01 | 10.8 | 9/2/01 | 100.2 | 1/16/02 | 12.6 | 2/23/02 | 9.5 |
| 6.04 | 7/29/01 | 12.4 | 8/11/01 | 10.3 | 9/2/01 | 44.4 | 1/18/02 | 21.3 | 2/23/02 | 14.2 |
| 6 01 | 7/29/01 | 12.3 | 8/11/01 | 10.2 | 9/2/01 | 148 | 1/18/02 | 21.7 | 2/24/02 | 51.9 |
| 10.02 | 7/29/01 | 12.3 | 8/11/01 | 10.1 | 9/2/01 | 128 | 1/18/02 | 20.5 | 2/24/02 | 61.7 |
| 10.25 | 7/30/01 | 12.8 | 8/11/01 | 10.3 | 9/2/01 | 95 | 1/18/02 | 20 9 | 2/24/02 | 51.2 |
| 10.12 | 7/30/01 | 12.9 | 8/12/01 | 6.44 | 9/2/01 | 48 6 | 1/20/02 | 22.1 | 2/24/02 | 26 8 |
| 8.52 | 7/30/01 | 12.6 | 8/12/01 | 6.61 | 9/2/01 | 142 | 1/20/02 | 15 6 | 2/27/02 | 4.48 |
| 8.19 | 7/30/01 | 12.6 | 8/12/01 | 6 51 | 9/2/01 | 127 | 1/20/02 | 20.6 | 2/27/02 | 4.18 |
| 8.66 | 7/31/01 | 12.56 | 8/12/01 | 6.5 | 9/3/01 | 56.7 | 1/20/02 | 23.8 | 2/27/02 | 3.99 |
| 8.75 | 7/31/01 | 13.25 | 8/13/01 | 9.21 | 9/3/01 | 47.4 | 1/24/02 | 20.6 | 2/27/02 | 4.02 |
| 8.83 | 7/31/01 | 12.59 | 8/13/01 | 9 26 | 9/4/01 | 102 | 1/24/02 | 18 4 | 3/6/02 | 7.57 |
| 8.57 | 7/31/01 | 12 56 | 8/13/01 | 9 04 | 9/4/01 | 113 | 1/24/02 | 17.5 | 3/6/02 | 7.57 |
| 8.63 | 8/1/01 | 12.11 | 8/13/01 | 9 19 | 9/4/01 | 125 | 1/25/02 | 17.4 | 3/6/02 | 7.6 |
| 9.78 | 8/1/01 | 12 25 | 8/25/01 | 7 07 | 9/4/01 | 97.7 | 1/29/02 | 20 6 | 3/6/02 | 8.58 |
| 9.86 | 8/1/01 | 12.15 | 8/26/01 | 7 81 | 9/5/01 | 94 8 | 1/29/02 | 21.9 | 3/13/02 | 7.02 |
| 9.71 | 8/1/01 | 12.16 | 8/26/01 | 7 84 | 9/5/01 | 108 | 1/29/02 | 21.6 | 3/13/02 | 7.36 |
| 9.74 | 8/2/01 | 11.9 | 8/27/01 | 7.92 | 9/5/01 | 117 | 1/29/02 | 20.5 | 3/13/02 | 6.86 |
| 10.9 | 8/2/01 | 12.2 | 8/27/01 | 7 86 | 9/5/01 | 89 | 1/31/02 | 18.7 | 3/13/02 | 6.95 |
| 11.1 | 8/2/01 | 12 | 8/28/01 | 7 58 | 9/7/01 | 68.6 | 1/31/02 | 18.2 | 3/20/02 | 5.9 |
| 10.9 | 8/2/01 | 12 | 8/28/01 | 7.45 | 9/7/01 | 53.8 | 1/31/02 | 18.1 | 3/20/02 | 5.65 |
| 11 | 8/3/01 | 13 | 8/29/01 | 6.3 | 9/8/01 | 52.5 | 1/31/02 | 20.78 | 3/20/02 | 5.53 |
| 12.13 | 8/3/01 | 13 2 | 8/29/01 | 6 22 | 9/8/01 | 41 | 2/2/02 | 22.3 | 3/20/02 | 5.56 |

Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

00B Ethanolamine
Method 300.0

| Date | Ethanolamine mg/l | Date | Ethanolamine mg/l | Date | Ethanolamine mg/l |
|---|---|---|---|---|---|
| 3/27/02 | 8.28 | 6/5/02 | 7.11 | 8/28/02 | 8 44 |
| 3/27/02 | 8.12 | 6/5/02 | 7 29 | 8/28/02 | 8.38 |
| 3/27/02 | 8.49 | 6/5/02 | 7.54 | 9/4/02 | 9 64 |
| 3/27/02 | 8 27 | 6/12/02 | 8 29 | 9/4/02 | 8 94 |
| 4/2/02 | 9.98 | 6/12/02 | 8.66 | 9/4/02 | 9 9 |
| 4/2/02 | 10 | 6/12/02 | 8 25 | 9/4/02 | 9.74 |
| 4/2/02 | 10 | 6/12/02 | 8.29 | 9/11/02 | 9 67 |
| 4/2/02 | 10.1 | 6/19/02 | 7.1 | 9/11/02 | 10 |
| 4/3/02 | 10.2 | 6/19/02 | 7.07 | 9/11/02 | 9 81 |
| 4/3/02 | 10.3 | 6/19/02 | 7.28 | 9/11/02 | 9 92 |
| 4/3/02 | 10.4 | 6/19/02 | 7.31 | 9/18/02 | 7.53 |
| 4/3/02 | 10 3 | 7/3/02 | 2.69 | 9/18/02 | 7.89 |
| 4/10/02 | 6.92 | 7/3/02 | 2.77 | 9/18/02 | 7.68 |
| 4/10/02 | 7.14 | 7/3/02 | 2.76 | 9/18/02 | 7.62 |
| 4/10/02 | 6 9 | 7/3/02 | 2.75 | 9/25/02 | 12 34 |
| 4/10/02 | 6 8 | 7/10/02 | 7.18 | 9/25/02 | 12 42 |
| 4/17/02 | 6 09 | 7/10/02 | 7.33 | 9/25/02 | 12 31 |
| 4/17/02 | 6.22 | 7/10/02 | 7.15 | 9/25/02 | 12.41 |
| 4/17/02 | 6.18 | 7/10/02 | 7.27 | 10/2/02 | 8.3 |
| 4/17/02 | 6.15 | 7/17/02 | 9.47 | 10/2/02 | 8 3 |
| 4/24/02 | 6.76 | 7/17/02 | 9.74 | 10/2/02 | 8 2 |
| 4/24/02 | 7.01 | 7/17/02 | 9.12 | 10/2/02 | 8 3 |
| 4/24/02 | 7.14 | 7/17/02 | 9 53 | 10/9/02 | 9 69 |
| 4/24/02 | 7 07 | 7/24/02 | 8 38 | 10/9/02 | 9 65 |
| 5/1/02 | 10 9 | 7/24/02 | 8 97 | 10/9/02 | 9 48 |
| 5/1/02 | 11 3 | 7/24/02 | 8 49 | 10/9/02 | 9 39 |
| 5/1/02 | 11.1 | 7/24/02 | 8 27 | 10/16/02 | 12 54 |
| 5/1/02 | 11 | 7/31/02 | 3 03 | 10/16/02 | 12 61 |
| 5/8/02 | 6 43 | 7/31/02 | 6 29 | 10/16/02 | 13 |
| 5/8/02 | 6.41 | 7/31/02 | 8 92 | 10/16/02 | 12.3 |
| 5/8/02 | 6 46 | 7/31/02 | 8 09 | 10/23/02 | 13 9 |
| 5/8/02 | 6 23 | 8/7/02 | 7.71 | 10/23/02 | 14 2 |
| 5/15/02 | < 0 500 | 8/7/02 | 7.7 | 10/23/02 | 14.1 |
| 5/15/02 | < 0 500 | 8/7/02 | 7.71 | 10/23/02 | 13 8 |
| 5/15/02 | < 0 500 | 8/7/02 | 7.7 | 10/30/02 | 13 3 |
| 5/15/02 | < 0 500 | 8/14/02 | 5 47 | 10/30/02 | 13.2 |
| 5/22/02 | 5 86 | 8/14/02 | 6 1 | 10/30/02 | 12.7 |
| 5/22/02 | 6.19 | 8/14/02 | 6 15 | 10/30/02 | 13 |
| 5/22/02 | 5 56 | 8/14/02 | 6 47 | 11/6/02 | 11.49 |
| 5/22/02 | 5 65 | 8/21/02 | 11 47 | 11/6/02 | 11.2 |
| 5/29/02 | < 0.500 | 8/21/02 | 11 94 | 11/6/02 | 11.67 |
| 5/29/02 | 6.53 | 8/21/02 | 11 53 | 11/6/02 | 11.2 |
| 5/29/02 | 1 42 | 8/21/02 | 11 87 | | |
| 5/29/02 | 2.59 | 8/28/02 | 8.11 | Max | 149 |
| 6/5/02 | 7.11 | 8/28/02 | 8.28 | Monthly Avg | 66 3 |
| | | | | Count | 1122 |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00B |

9 WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the DEQ under separate correspondence The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this application.

A. Are there water treatment additives in the discharge from this facility?

☐ No, proceed to item 4

☒ Yes.

B. Have these water treatment additives been previously approved?

☐ No, continue with C below.

☒ Yes Submit a list of the previously approved water treatment additives and the date they were approved. The information listed in C. 1-8 must be updated if it has changed since the previous approval

C Submit a list of water treatment additives that are or may be discharged from the facility. Applicants must submit the information listed below for each additive.

1. The water treatment additive Material Safety Data Sheet
2. The proposed water treatment additive discharge concentration.
3. The discharge frequency (i e , number of hours per day, week, etc )
4. The outfall the water treatment additive is to be discharged from
5. The type of removal treatment, if any, that the water treatment additive receives prior to discharge.
6. The water treatment additive function (i e , microbiocide, flocculant, etc.).
7. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Cenodaphnia sp., Daphnia sp , or Simocephalus sp.)
8. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323 1057(2)(a) of the Water Quality Standards Examples of tests that would meet this requirement include a 96-hour LC50 for a rainbow trout, bluegill, or fathead minnow

The required toxicity information (described in items 7 and 8 above) is currently available in the SWQD files for the water treatment additives listed on the DEQ's Internet page **http://www.deq.state.mi.us/swq/gleas/docs/wta/WTAlist.doc.** If you intend to use one of the water treatment additives on this list, only the information in items 1 through 6 above needs to be submitted to the SWQD.

**Note:** The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive.

10 WHOLE EFFLUENT TOXICITY TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results below unless the test has been submitted to the department in the last 5 years

NO

Michigan Department of Environmental Quality-Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

**PLEASE TYPE OR PRINT**

| FACILITY NAME<br>**Donald C. Cook Nuclear Plant** | NPDES or COC PERMIT NUMBER<br>**MI0005827** | Outfall Number<br>**00B** |
|---|---|---|

9 WATER TREATMENT ADDITIVES

| Water Treatment Additive | Approval Date |
|---|---|
| Ethanolamine solution, such as:<br>Betz Powerline 1440, Betz Powerline 1480, Nalco 92UM001 | 5/23/00 NPDES Permit approval 9/28/95 |
| Hydrazine Solution, such as:<br>Betz Cortrol OS5035, (Formerly Betz Powerline 1205), Betz Cortrol OS5010, Nalco 19H | 5/23/00 NPDES Permit approval 9/28/95 |
| Carbohydrazide Solution such as:<br>Nalco 1250 plus, Nalco Eliminox | 3/25/94 application, 4/15/94 approval, NPDES Permit approval 9/28/95. |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Section III.B
# Outfall 00C

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

Complete a separate Section III.B - Outfall Information (pages 26-31) for each outfall at the facility Make copies of this blank section of the application for additional outfalls as necessary.

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00C |

1. OUTFALL INFORMATION (see page 25 for instruction on completion of this page)

| | | | | | |
|---|---|---|---|---|---|
| A. | Watershed: Lower St. Joseph | | | | |
| B | Receiving Water: Lake Michigan | | | | |
| C | County: Berrien | | Township: Lake | | |
| D. | ¼, ¼: SW | ¼: NW | Section: 06 | Town: 06S | Range: 19W |
| E. | Latitude: 41 58' 30" | | Longitude: 86 34' 30" | | |

F. Type of Wastewater Discharged (Check all that apply to this outfall)

- ☐ Contact Cooling
- ☐ Sanitary Wastewater
- ☐ Groundwater Cleanup
- ☐ Storm Water (regulated)
- ☐ Noncontact Cooling
- ☒ Process Wastewater
- ☐ Hydrostatic Pressure Test
- ☐ Storm Water (not regulated)
- ☐ Storm water subject to effluent guidelines (indicate under which category) ____
- ☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" in appendix) ____

J What is the maximum Facility Design Flow Rate: 0 043 MGD

G. What is the maximum discharge flow authorized for this outfall: Seasonal Dischargers ____ MGY Continue with Item H.

Continuous Dischargers 0 043 MGD Continue with Item I.

H. Seasonal Discharge

List the discharge periods (by month) and the volume discharged in the space provided below

| From | Through | Discharge Volume | Annual Total |
|---|---|---|---|
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |

I. Continuous Discharge

How often is there a discharge from this outfall (on the average)? 24 Hours/Day 365 Days/Year

**Batch dischargers must provide the following additional information:**

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate ____ Number of batches discharged per day ____

| | Minimum | Average | Maximum |
|---|---|---|---|
| Batch Volume (gallons) | | | |
| Batch Duration (minutes) | | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00C |

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility Page 7 of the appendix contains an abbreviated list of various industries and the types of information each shall report in this application. For assistance call the Permits Section. All industries shall provide the name of each process and the SIC or the NAICS code for the process. If the wastestream is not regulated under federal categorical standards, the applicant shall report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information see page ii, item 8.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Plant Heating Boiler Blowdown

B. SIC or NAICS code: 4911

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported): Plant Heating Boiler Blowdown. 0 043 MGD Maximum flow. 2247 MWE total plant electrical generation.

PROCESS INFORMATION

A. Name of the process contributing to the discharge _____

B SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B SIC or NAICS code: _____

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

## INSTRUCTIONS FOR COMPLETING SECTION III, ITEM B.3.

In accordance with 40 CFR 122.21, all applicants must report $CBOD_5$, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH. The applicant may, however, request that reporting of data for one or more of these required parameters be waived. Such request must be supported by adequate rationale. The request shall be included as an attachment to this application.

Report available discharge data for the parameters listed. Actual data shall be provided for existing discharges and expected or estimated data provided for proposed discharges Please include an explanation if "Pollution Prevention" is expected to provide reduction of pollutants. See Page 8 of the appendix for a list of specific parameters for which data must be provided for specific types of discharges (e.g., noncontact cooling waters, gasoline groundwater cleanups, etc.) For assistance in determining the appropriate parameters to report, call the Permits Section

If data are available for other parameters not listed in Section III.B.3., the applicant shall report these data in the blank spaces provided or attach the information to this application on 8½" x 11" paper.

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows: µg/l = micrograms per liter, mg/l = milligrams per liter, °F = degrees Fahrenheit, °C = degrees Celsius. **See page ii number 5 for analytical requirements.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total $BOD_5$, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use **24-hour composite samples** unless other frequency-sample type analyses are available.

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the district office, on a separate sheet attached to the application form, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled. See pages ii and iii for sampling definitions, including "maximum daily concentration", and "maximum monthly concentration".

REPORTING OF INTAKE DATA

Applicants are required to report intake water data when they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters remaining after treatment which is not removed by the treatment system. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122.45(g)). To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information shall be submitted for each parameter:

a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.

b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed.

c) When applicable (for example, when the pollutant represents a class of compounds, e g , $BOD_5$, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge. Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants.

**Note:** Applicants for groundwater remediation discharges should also report the intake characteristics of contaminated groundwater.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00C |

3. WASTEWATER CHARACTERISTICS - CONVENTIONAL POLLUTANTS - Instructions for completing this page are on the facing page.

☒ Check this box if additional information is included as an attachment. To submit additional information see page ii, item 8

| Parameter | Maximum Daily Concentration | Maximum Monthly Concentration | Units | Number of Analyses | Sample Type |
|---|---|---|---|---|---|
| Biochemical Oxygen Demand - five day ($BOD_5$) | 4 | 4 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| COD (Chemical oxygen demand) | 10 | 10 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| TOC (Total organic carbon) | 3 | 3 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Ammonia Nitrogen (as N) | 0 08 | 0 08 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Total Suspended Solids | 17.8 | 8 9 | mg/l | 14 | ☒ Grab ☐ 24 Hr Comp |
| Total Dissolved Solids | NA | NA | mg/l | NA | ☐ Grab ☐ 24 Hr Comp |
| Total Phosphorus (as P) | <0.1 | <0.1 | mg/l | 1 | ☐ Grab ☒ 24 Hr Comp |
| Fecal Coliform Bacteria (report geometric means) | maximum-7day NA | NA | counts/100ml | NA | Grab |
| otal Residual Chlorine | <0.08 | <0 08 | ☒ mg/l ☐ µg/l | 2 | Grab |
| Dissolved Oxygen | minimum daily 0 | ~~Do Not Use~~ | mg/l | 22 | ☒ Grab ☐ 24 Hr Comp |
| pH (report maximum and minimum of individual samples) | minimum 7 8 | maximum 9 7 | standard units | 22 | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Summer | * NA | NA | ☐ °F ☐ °C | NA | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Winter | * NA | NA | ☐ °F ☐ °C | NA | ☒ Grab ☐ 24 Hr Comp |
| Oil & Grease | <5 | <5 | mg/l | 1 | Grab |
| Hydrazine | 0.04 | 0 013 | mg/l | 22 | ☒ Grab ☐ 24 Hr Comp |
| Ethanolamine | 16.1 | 11 3 | mg/l | 20 | ☒ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| See Attached for additional Data | | | | | ☐ Grab ☐ 24 Hr Comp |
| * NA - Internal Outfall | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Co |
| | | | | | ☐ Grab ☐ 24 Hr Comp |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00C |

4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all the pollutants identified in Table 3. Existing primary industries must also provide the results of at least one effluent analysis for any other chemical listed in Table 2 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New primary industries that propose to discharge process wastewater must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

5 DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent, must submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6. All effluent analyses for dioxin and furan congeners must be conducted using EPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any dioxin and furan congener listed in Table 6

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel), 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent must provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6.

6. OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries, or existing primary industries that discharge non-process wastewater, must submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New secondary industries, or new primary industries that propose to discharge non-process wastewater, must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, must provide the results of at least one analyses for any chemical listed in Table 4 known or believed to be present in facility effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in facility effluent. In addition, submit the results of any effluent analysis performed within the last 5 years for any chemical listed in Tables 4 and 5

New industries, regardless of discharge type, must provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be in facility effluent.

8 INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, must provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in facility effluent that have not been previously identified in this application. Quantitative effluent data that are less than 5 years old for these chemicals must be reported

**NOTE:** All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on page 31. To submit additional information see page ii, item 8 If the effluent concentrations are estimated, place an E in the "Analytical Method" column The following fields must be completed for each data row: Parameter, CAS No., Concentration(s), Sample Type, Analytical Method, Quantification Level and Detection Level See page ii, number 5 for analytical test requirements.

Michigan Department of Environmental Quality- Water Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00C |

| SAMPLE DATE → | | 5/30/02 | 5/30/02 | 5/31/02 | 6/1/02 | 6/1/02 | 6/2/02 | 10/17/02 | 10/18/02 | 10/18/02 | 10/19/02 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | CAS No. | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Sample Type | Analytical | QL | DL |
| Hyrazine | 7803578 | 12 | 15.3 | 13 | 5.1 | 8 7 | 40 | <2.0 | 8 | 6 3 | <3.0 | Grab | D1385 | 3 | 1 0 |
| Ethanolamine | 141435 | 700 | 600 | 600 | <500 | 4000 | 3900 | 2200 | 13100 | 16100 | 13600 | Grab | | 800 | 300 |
| | | | | | | | | | | | | | | | |
| See Attached | | | | | | | | | | | | | | | |
| for additional | | | | | | | | | | | | | | | |
| data. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Section III.B.6 and 7

Additional Sample Data
Summary Sheet

00C

**For Outfall 00C**

| Parameter | 2/1/99 | 5/14/01 | Sample type | Max Daily | Analytical Method | Max monthly | # of Analyses |
|---|---|---|---|---|---|---|---|
| **Table 2** | | | | | | | |
| See Attached data set from Belmonte Park Laboratories. | | | | | | | |
| **Table 3** | | | | | | | |
| Antimony (ug/l) | 2 | <1 | Grab | 2 | 204.2/200.7 | 2 | 2 |
| Arsenic (ug/l) | <1 | <1 | Grab | <1 | 206 2/200.7 | <1 | 2 |
| Beryllium (ug/l) | <1 | <0 2 | Grab | <1 | 200.7 | <1 | 2 |
| Cadmium (ug/l) | <0 2 | <0 2 | Grab | <0.2 | 213.2/200.7 | <0 2 | 2 |
| Chromium (ug/l) | <10 | <2 | Grab | <10 | 200.7 | <10 | 2 |
| Copper (ug/l) | 12 | 10 | Grab | 12 | 220.2/200.7 | 12 | 2 |
| Lead (ug/l) | <1 | <1 | Grab | <1 | 239.2/200.7 | <1 | 2 |
| Nickel (ug/l) | <5 | <3 | Grab | <5 | 249 2/200 7 | <5 | 2 |
| Total Phenols (ug/l) | <10 | - | Grab | <10 | 420 1 | <10 | 1 |
| Selenium (ug/l) | - | 2 | Grab | 2 | 270 3 | 2 | 1 |
| Silver(ug/l) | <0.5 | <0 2 | Grab | <0.5 | 272.2/200 7 | <0.5 | 2 |
| Thallium -(ug/l) | <1 | <1 | Grab | <1 | 279 2 | <1 | 2 |
| Zinc (ug/l) | - | <4 | Grab | <4 | 200 7 | <20 | 1 |
| Cyanide (mg/l) | <0 01 | 0.01 | Grab | 0 01 | 335 2 | 0.01 | 2 |
| Mercury (ng/l) | - | <0 5 | Grab | <0 5 | 1631 | <0.5 | 1 |
| **Table 4** | | | | | | | |
| Chlorine, total residual (mg/l) | <0 05 | <0 08 | Grab | <0 08 | 330 5 | <0 08 | 2 |
| Sulfate (mg/l) | 113 | 1 | Composite | 113 | 375 4 | 113 | 2 |
| Additional Data From Belmonte Park Laboratories is attached. | | | | | | | |
| **Table 5** | | | | | | | |
| Additional Data From Belmonte Park Laboratories is attached. | | | | | | | |
| See Attached data set From Cook Nuclear Plant Laboratory. | | | | | | | |

| NPDES Application Section III.B.6&7 Table 5 data for Outfall OOC | | | | | | | |
|---|---|---|---|---|---|---|---|
| Analyzed by Cook Plant Lab. | | | | | | | |
| | Date | Ethanolamine mg/L | Hydrazine ug/L | | | | |
| | 8/30/01 | | | | | | |
| | 9/19/01 | | | | | | |
| | 10/1/01 | | | | | | |
| | 12/14/01 | | | | | | |
| | 12/15/01 | | | | | | |
| | 12/18/01 | | | | | | |
| | 5/13/02 | 1 | 31 | | | | |
| | 5/14/02 | 2.1 | < 3 0 | | | | |
| | 5/15/02 | 2 3 | 14.1 | | | | |
| | 5/16/02 | 1.9 | < 3 0 | | | | |
| | 5/16/02 | | | | | | |
| | 5/16/02 | | | | | | |
| | 5/25/02 | | | | | | |
| | 5/26/02 | 0 6 | 14.5 | | | | |
| | 5/27/02 | 0 6 | 6.3 | | | | |
| | 5/27/02 | | 11.3 | | | | |
| | 5/28/02 | < 0.5 | 8 5 | | | | |
| | 5/28/02 | < 0 5 | 7 4 | | | | |
| | 5/28/02 | | | | | | |
| | 5/28/02 | 0 6 | 13 8 | | | | |
| | 5/29/02 | 0 9 | 13 9 | | | | |
| | 5/30/02 | 0 6 | 15 3 | | | | |
| | 5/30/02 | 0 7 | 12 | | | | |
| | 5/31/02 | 0 6 | 13 | | | | |
| | 5/31/02 | | 12.4 | | | | |
| | 6/1/02 | < 0.5 | 5.1 | | | | |
| | 6/1/02 | 4 | 8.7 | | | | |
| | 6/2/02 | 3 9 | 40 | | | | |
| | 6/2/02 | | | | | | |
| | 10/17/02 | 2 2 | < 2 0 | | | | |
| | 10/18/02 | 13 1 | 8 | | | | |
| | 10/18/02 | 16 1 | 6 3 | | | | |
| | 10/19/02 | | | | | | |
| | 10/19/02 | 13 6 | < 3 0 | | | | |
| | | | | | | | |
| | Max | 16 1 | 40 | | | | |
| | Max Monthly | 11 3 | 13 | | | | |
| | Count | 20 | 22 | | | | |
| | Min | - | - | | | | |

Belmonte Park Environmental Laboratories

AMERICAN ELECTRIC POWER (AEP)
1 COOK PLACE
BRIDGMAN, MICHIGAN 49106

Attn: BLAIR ZORDELL

Purchase Order: 4307976
Invoice Number:

Order #: 99-02-060
Date: 03/16/99 09:22
Work ID: OUTFALL 001 - 00C
Date Received: 02/02/99
Date Completed: 03/16/99

Client Code: AEP_4

ND= NONE DETECTED
OHIO CERT.# 12345

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | |
|---|---|---|
| 01 | OUTFALL 001 | 02/01/99 |
| 02 | OUTFALL 001 | 02/01/99 |
| 03 | OUTFALL 001 | 02/01/99 |
| 04 | OUTFALL 001 | 02/01/99 |
| 05 | OUTFALL 001 | 02/01/99 |
| 06 | OUTFALL 001 | 02/01/99 |
| 07 | OUTFALL 001 | 02/01/99 |
| 08 | OUTFALL 001 | 02/01/99 |
| 09 | OUTFALL 001 | 02/01/99 |
| 10 | OUTFALL 001 | 02/01/99 |
| 11 | OUTFALL 001 | 02/01/99 |
| 12 | OUTFALL 001 | 02/01/99 |
| 13 | OUTFALL 001 | 02/01/99 |
| 14 | OUTFALL 001 | 02/01/99 |
| 15 | OUTFALL 001 | 02/01/99 |
| 16 | OUTFALL 00G | 02/01/99 |
| 17 | OUTFALL 00G | 02/01/99 |
| 18 | OUTFALL 00G | 02/01/99 |
| 19 | OUTFALL 00G | 02/01/99 |
| 20 | OUTFALL 00G | 02/01/99 |
| 21 | OUTFALL 00G | 02/01/99 |
| 22 | OUTFALL 00G | 02/01/99 |
| 23 | OUTFALL 00G | 02/01/99 |

| Sample Number | Sample Description | |
|---|---|---|
| 24 | OUTFALL 00G | 02/01/99 |
| 25 | OUTFALL 00G | 02/01/99 |
| 26 | OUTFALL 00G | 02/01/99 |
| 27 | OUTFALL 00G | 02/01/99 |
| 28 | OUTFALL 00G | 02/01/99 |
| 29 | OUTFALL 00G | 02/01/99 |
| 30 | OUTFALL 00G | 02/01/99 |
| 31 | OUTFALL 00C | 02/01/99 |
| 32 | OUTFALL 00C | 02/01/99 |
| 33 | OUTFALL 00C | 02/01/99 |
| 34 | OUTFALL 00C | 02/01/99 |
| 35 | OUTFALL 00C | 02/01/99 |
| 36 | OUTFALL 00C | 02/01/99 |
| 37 | OUTFALL 00C | 02/01/99 |
| 38 | OUTFALL 00C | 02/01/99 |
| 39 | OUTFALL 00C | 02/01/99 |
| 40 | OUTFALL 00C | 02/01/99 |
| 41 | OUTFALL 00C | 02/01/99 |
| 42 | OUTFALL 00C | 02/01/99 |
| 43 | OUTFALL 00C | 02/01/99 |
| 44 | OUTFALL 00C | 02/01/99 |
| 45 | OUTFALL 00C | 02/01/99 |

Belmonte Park
Environmental
Laboratories



Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Matt Lake. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

M. Lake

Certified By
MATT LAKE

Belmonte Park Environmental Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

**Sample: 01A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| 5day CBOD, | EPA 405.1 | 3 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, | EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 02A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| COD, | EPA 410.4 | 6 | 5 | mg/L | 02/19/99 | LG |
| TOC, | EPA 415.1 | 4.5 | 1 | mg/L | 02/09/99 | JW |

**Sample: 03A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| AMMONIA N, | EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 05A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | | - | | - | | SD |
| EXTRACTION, | EPA 608 | - | | - | | SD |

**Sample: 06A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| ALUMINUM, | EPA 200.7 | 0.05 | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, | EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, | EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, | EPA 200.7 | 0.021 | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, | EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, | EPA 200.7 | 0.07 | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, | EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, | EPA 220.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, | EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/12/99 | RJE |

Belmonte Park
Environmental
Laboratories



## TEST RESULTS BY SAMPLE

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| MAGNESIUM, | EPA 200.7 | 11 | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | 0.12 | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

**Sample: 07A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 08A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 09A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 10A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.38 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | 0.37 | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

Belmonte Park Environmental Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

**Sample: 11A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 12A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 13A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 14A OUTFALL 001** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 16A OUTFALL 00G** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 4 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 17A OUTFALL 00G** 02/01/99 Collected: 02/01/99 Category: AQUEOUS

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | 2.1 | 1 | mg/L | 02/09/99 | JW |

Belmonte Park
Environmental
Laboratories



## TEST RESULTS BY SAMPLE

**Sample: 18A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 20A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

**Sample: 21A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ALUMINUM, EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, EPA 200.7 | 0.022 | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, EPA 200.7 | 0.06 | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, EPA 220.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| MAGNESIUM, EPA 200.7 | 12 | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, WATER | - | | - | | EP |
| MOLYBDENUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, EPA 200.7 | 0.14 | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

**Sample: 22A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/15/99 | LG |

**Sample: 23A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 24A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 25A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.50 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 26A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| OIL & GREASE, | EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 27A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| GROSS ALPHA, | IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, | IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

**Sample: 28A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | 113 | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 29A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 31A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 4 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 32A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | BDL | 1 | mg/L | 02/09/99 | JW |

**Sample: 33A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 35A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

Belmonte Park Environmental Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

**Sample: 36A OUTFALL 00C** **02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| ALUMINUM, | EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, | EPA 204.2 | 0.002 | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, | EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, | EPA 200.7 | BDL | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, | EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, | EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, | EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, | EPA 220.2 | 0.012 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, | EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| MAGNESIUM, | EPA 200.7 | BDL | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

**Sample: 37A OUTFALL 00C** **02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 38A OUTFALL 00C** **02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



## TEST RESULTS BY SAMPLE

**Sample: 39A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 40A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| NITRATE-NITRITE N | BDL | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 41A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 42A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 43A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 44A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/98 | EM |

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 112 | 76 - 114 |
| D8-TOLUENE | 94 | 88 - 110 |



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 96 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020934
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 85 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 72 | 43 | - | 116 |
| p-TERPHENYL-d14 | 95 | 33 | - | 141 |
| PHENOL-d6 | 46 | 10 | - | 94 |
| 2-FLUOROPHENOL | 74 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 50 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022524
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 90 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 93 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020913
UNITS ug/L



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 15A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 65 | 35 - 114 |
| 2-FLUOROBIPHENYL | 78 | 43 - 116 |
| p-TERPHENYL-d14 | 113 | 33 - 141 |
| PHENOL-d6 | 25 | 10 - 94 |
| 2-FLUOROPHENOL | 30 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 93 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206501W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 113 | 76 - 114 |
| D8-TOLUENE | 92 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 93 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020935
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | |
|---|---|---|---|
| NITROBENZENE-d5 | 64 | 35 - | 114 |
| 2-FLUOROBIPHENYL | 65 | 43 - | 116 |
| p-TERPHENYL-d14 | 77 | 33 - | 141 |
| PHENOL-d5 | 35 | 10 - | 94 |
| 2-FLUOROPHENOL | 33 | 21 - | 100 |
| 2,4,6-TRIBROMOPHENOL | 65 | 10 - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022525
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 89 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 94 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020914
UNITS ug/L

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608
Collected: 02/01/99 Category: AQUEOUS

Test Code: 608

METHOD EPA 608
BDL BELOW DETECTION LIMIT



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 30A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 60 | 35 - 114 |
| 2-FLUOROBIPHENYL | 78 | 43 - 116 |
| p-TERPHENYL-d14 | 115 | 33 - 141 |
| PHENOL-d6 | 28 | 10 - 94 |
| 2-FLUOROPHENOL | 35 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 85 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206504W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 34A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 114 | 76 - 114 |
| D8-TOLUENE | 94 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 34A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 93 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020936
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 77 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 66 | 43 | - | 116 |
| p-TERPHENYL-d14 | 82 | 33 | - | 141 |
| PHENOL-d6 | 62 | 10 | - | 94 |
| 2-FLUOROPHENOL | 71 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 66 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022526
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 93 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 92 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020915
UNITS ug/L



11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 45A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 63 | 35 - 114 |
| 2-FLUOROBIPHENYL | 70 | 43 - 116 |
| p-TERPHENYL-d14 | 100 | 33 - 141 |
| PHENOL-d6 | 25 | 10 - 94 |
| 2-FLUOROPHENOL | 38 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 83 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206503W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

| Facility name: | NPDES Permit number: | Outfall Number: |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00C |

## Addendum to NPDES Renewal Application Section III.B.10
## Toxic Pollutant Reasonable Potential Effluent Data

Sampling results indicate the presence of toxic pollutants in the Cook Nuclear Plant discharges as follows:

**Copper** was detected in Outfall 00C (Plant Heating Boiler Blowdown). Based on knowledge of the plant processes, there is reasonable potential for copper to be present in these discharges.

**Ethanolamine** was detected in Outfall 00C (Plant Heating Boiler Blowdown). Based on knowledge of the plant processes, there is reasonable potential for ethanolamine to be present in these discharges.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00C |

9 WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the DEQ under separate correspondence. The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this application

A. Are there water treatment additives in the discharge from this facility?

☒ No, proceed to item 4.

☐ Yes

B. Have these water treatment additives been previously approved?

☐ No, continue with C. below.

☐ Yes Submit a list of the previously approved water treatment additives and the date they were approved. The information listed in C 1-8 must be updated if it has changed since the previous approval

C. Submit a list of water treatment additives that are or may be discharged from the facility Applicants must submit the information listed below for each additive

1 The water treatment additive Material Safety Data Sheet.

2. The proposed water treatment additive discharge concentration.

3 The discharge frequency (i e , number of hours per day, week, etc ).

4 The outfall the water treatment additive is to be discharged from.

5 The type of removal treatment, if any, that the water treatment additive receives prior to discharge.

6. The water treatment additive function (i e , microbiocide, flocculant, etc )

7. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Ceriodaphnia sp , Daphnia sp , or Simocephalus sp )

8 The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323 1057(2)(a) of the Water Quality Standards Examples of tests that would meet this requirement include a 96-hour LC50 for a rainbow trout, bluegill, or fathead minnow

The required toxicity information (described in items 7 and 8 above) is currently available in the SWQD files for the water treatment additives listed on the DEQ's Internet page **http://www.deq state.mi.us/swq/gleas/docs/wta/WTAlist.doc.** If you intend to use one of the water treatment additives on this list, only the information in items 1 through 6 above needs to be submitted to the SWQD

**Note:** The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive.

10. WHOLE EFFLUENT TOXICITY TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results below unless the test has been submitted to the department in the last 5 years

**PLEASE TYPE OR PRINT**

| FACILITY NAME | NPDES or COC PERMIT NUMBER | Outfall Number |
|---|---|---|
| **Donald C. Cook Nuclear Plant** | **MI0005827** | **00C** |

9. WATER TREATMENT ADDITIVES

| Water Treatment Additive | Approval Date |
|---|---|
| Ethanolamine solution, such as.<br>Betz Powerline 1440, Betz Powerline 1480, Nalco 92UM001 | 5/23/00 NPDES Permit approval 9/28/95 |
| Hydrazine Solution, such as<br>Betz Cortrol OS5035, (Formerly Betz Powerline 1205), Betz Cortrol OS5010, Nalco 19H | 5/23/00 NPDES Permit approval 9/28/95 |
| Carbohydrazide Solution such as:<br>Nalco 1250 plus, Nalco Eliminox | 3/25/94 application, 4/15/94 approval, NPDES Permit approval 9/28/95 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Section III.B
# Outfall 00G

DEQ

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

mplete a separate Section III.B. - Outfall Information (pages 26-31) for each outfall at the facility. Make copies of this blank section of the application for additional outfalls as necessary.

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00G |

1 OUTFALL INFORMATION (see page 25 for instruction on completion of this page)

| | | | | | |
|---|---|---|---|---|---|
| A. | Watershed: Lower St. Joseph | | | | |
| B | Receiving Water: Lake Michigan | | | | |
| C | County: Berrien | | Township: Lake | | |
| D. | ¼, ¼: SW | ¼: NW | Section: 06 | Town: 06S | Range: 19W |
| E. | Latitude: 41 58' 30" | | Longitude: 86 34' 30" | | |

F. Type of Wastewater Discharged (Check all that apply to this outfall)

- ☐ Contact Cooling
- ☐ Sanitary Wastewater
- ☐ Groundwater Cleanup
- ☐ Storm Water (regulated)
- ☐ Noncontact Cooling
- ☒ Process Wastewater
- ☐ Hydrostatic Pressure Test
- ☐ Storm Water (not regulated)
- ☐ Storm water subject to effluent guidelines (indicate under which category) ____
- ☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" in appendix) ____

J. What is the maximum Facility Design Flow Rate 0 366 MGD

G What is the maximum discharge flow authorized for this outfall Seasonal Dischargers ____ MGY Continue with Item H

Continuous Dischargers 0 366 MGD Continue with Item I

H. Seasonal Discharge

List the discharge periods (by month) and the volume discharged in the space provided below.

| From | Through | Discharge Volume | Annual Total |
|---|---|---|---|
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |

I Continuous Discharge

How often is there a discharge from this outfall (on the average)? 24 Hours/Day 365 Days/Year

**Batch dischargers must provide the following additional information:**

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate ____ Number of batches discharged per day ____

| | Minimum | Average | Maximum |
|---|---|---|---|
| Batch Volume (gallons) | | | |
| Batch Duration (minutes) | | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

EASE TYPE OR PRINT

| CILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00G |

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility. Page 7 of the appendix contains an abbreviated list of various industries and the types of information each shall report in this application. For assistance call the Permits Section. All industries shall provide the name of each process and the SIC or the NAICS code for the process. If the wastestream is not regulated under federal categorical standards, the applicant shall report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information see page ii, item 8.

PROCESS INFORMATION

A. Name of the process contributing to the discharge: Reverse Osmosis system reject

B. SIC or NAICS code. 4911

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported) Reverse osmosis system reject flow 0 366 MGD maximum flow, 2247 MWE total plant electrical generation.

PROCESS INFORMATION

A. Name of the process contributing to the discharge _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A Name of the process contributing to the discharge: _____

B SIC or NAICS code _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A. Name of the process contributing to the discharge. _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported).

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

## INSTRUCTIONS FOR COMPLETING SECTION III, ITEM B.3.

In accordance with 40 CFR 122.21, all applicants must report $CBOD_5$, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH. The applicant may, however, request that reporting of data for one or more of these required parameters be waived Such request must be supported by adequate rationale. The request shall be included as an attachment to this application.

Report available discharge data for the parameters listed. Actual data shall be provided for existing discharges and expected or estimated data provided for proposed discharges. Please include an explanation if "Pollution Prevention" is expected to provide reduction of pollutants See Page 8 of the appendix for a list of specific parameters for which data must be provided for specific types of discharges (e.g , noncontact cooling waters, gasoline groundwater cleanups, etc ) For assistance in determining the appropriate parameters to report, call the Permits Section.

If data are available for other parameters not listed in Section III.B 3 , the applicant shall report these data in the blank spaces provided or attach the information to this application on 8½" x 11" paper.

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows. µg/l = micrograms per liter, mg/l = milligrams per liter, °F = degrees Fahrenheit, °C = degrees Celsius. **See page ii number 5 for analytical requirements.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total $BOD_5$, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use **24-hour composite samples** unless other frequency-sample type analyses are available.

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls If the request is granted by the district office, on a separate sheet attached to the application form, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled See pages ii and iii for sampling definitions, including "maximum daily concentration", and "maximum monthly concentration".

REPORTING OF INTAKE DATA

Applicants are required to report intake water data when they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants. A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters remaining after treatment which is not removed by the treatment system. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122.45(g)) To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment In addition to the analytical results, the following information shall be submitted for each parameter.

a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.

b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed.

c) When applicable (for example, when the pollutant represents a class of compounds, e.g., $BOD_5$, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge. Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants.

**Note:** Applicants for groundwater remediation discharges should also report the intake characteristics of contaminated groundwater.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00G |

3. WASTEWATER CHARACTERISTICS - CONVENTIONAL POLLUTANTS - Instructions for completing this page are on the facing page

☒ Check this box if additional information is included as an attachment To submit additional information see page ii, item 8.

| Parameter | Maximum Daily Concentration | Maximum Monthly Concentration | Units | Number of Analyses | Sample Type |
|---|---|---|---|---|---|
| Biochemical Oxygen Demand - five day ($BOD_5$) | 4 | 4 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| COD (Chemical oxygen demand) | 8 | 8 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| TOC (Total organic carbon) | 3 | 3 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Ammonia Nitrogen (as N) | <0.5 | <0 5 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Total Suspended Solids | 2 | <4 | mg/l | 102 | ☒ Grab ☐ 24 Hr Comp |
| Total Dissolved Solids | NA | NA | mg/l | NA | ☐ Grab ☐ 24 Hr Comp |
| Total Phosphorus (as P) | <0 1 | <0.1 | mg/l | 1 | ☐ Grab ☒ 24 Hr Comp |
| Fecal Coliform Bacteria (report geometric means) | maximum-7day NA | NA | counts/100ml | NA | Grab |
| tal Residual Chlorine | 0 21 | 0 21 | ☒ mg/l ☐ µg/l | 2 | Grab |
| Dissolved Oxygen | minimum daily NA | ~~Do Not Use~~ | mg/l | NA | ☐ Grab ☐ 24 Hr Comp |
| pH (report maximum and minimum of individual samples) | minimum 3 2 | maximum 6 9 | standard units | 25 | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Summer | 76 6 | 76 6 | ☒ °F ☐ °C | 4 | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Winter | 44 2 | 44.2 | ☒ °F ☐ °C | 2 | ☒ Grab ☐ 24 Hr Comp |
| Oil & Grease | <5 | <5 | mg/l | 1 | Grab |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| See Attached for additional Data | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Corr |
| | | | | | ☐ Grab ☐ 24 Hr Comp |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

EASE TYPE OR PRINT

| CILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00G |

4 PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all the pollutants identified in Table 3 Existing primary industries must also provide the results of at least one effluent analysis for any other chemical listed in Table 2 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New primary industries that propose to discharge process wastewater must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent

5 DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel), 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent, must submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6 All effluent analyses for dioxin and furan congeners must be conducted using EPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any dioxin and furan congener listed in Table 6

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel); 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent must provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6

6 OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries, or existing primary industries that discharge non-process wastewater, must submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3.

New secondary industries, or new primary industries that propose to discharge non-process wastewater, must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, must provide the results of at least one analyses for any chemical listed in Table 4 known or believed to be present in facility effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in facility effluent In addition, submit the results of any effluent analysis performed within the last 5 years for any chemical listed in Tables 4 and 5.

New industries, regardless of discharge type, must provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be in facility effluent

8. INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, must provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in facility effluent that have not been previously identified in this application Quantitative effluent data that are less than 5 years old for these chemicals must be reported

**NOTE:** All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on page 31. To submit additional information see page ii, item 8 If the effluent concentrations are estimated, place an E in the "Analytical Method" column The following fields must be completed for each data row Parameter, CAS No , Concentration(s), Sample Type, Analytical Method, Quantification Level and Detection Level See page ii, number 5 for analytical test requirements.

Michigan Department of Env ımental Quality- Water Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00G |

| SAMPLE DATE → | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | CAS No. | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Sample Type | Analytical | QL | DL |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| See Attached | | | | | | | | | | | | | | | |
| for additional | | | | | | | | | | | | | | | |
| data. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Additional Sample Data
Summary Sheet



**For Outfall 00G**

| Parameter | 2/1/99 | 3/21/02 | 5/30/02 | Sample type | Max Daily | Analytical Method | Max monthly | # of Analyses |
|---|---|---|---|---|---|---|---|---|
| **Table 2** | | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | | |
| **Table 3** | | | | | | | | |
| Antimony (ug/l) | <1 | <1 | - | Grab | <1 | 204 2/200.7 | <1 | 2 |
| Arsenic (ug/l) | <1 | 2 | <1 | Grab | 2 | 206.2/200.7 | 2 | 3 |
| Beryllium (ug/l) | <1 | <0.2 | - | Grab | <1 | 200 7 | <1 | 2 |
| Cadmium (ug/l) | <0 2 | <0.2 | - | Grab | <0 2 | 213 2/200 7 | <0 2 | 2 |
| Chromium (ug/l) | <10 | <2 | - | Grab | <10 | 200 7 | <10 | 2 |
| Copper (ug/l) | <1 | 1 | 1 | Grab | 1 | 220 2/200 7 | 1 | 3 |
| Lead (ug/l) | <1 | <1 | - | Grab | <1 | 239 2/200.7 | <1 | 2 |
| Nickel (ug/l) | <5 | <3 | - | Grab | <5 | 249 2/200.7 | <5 | 2 |
| Total Phenols (ug/l) | <0 01 | - | - | Grab | <0 01 | 420 1 | <0 01 | 1 |
| Selenium (ug/l) | - | <1 | - | Grab | <1 | 270 3 | <1 | 1 |
| Silver(ug/l) | <0 5 | <0.2 | - | Grab | <0 5 | 272 2/200.7 | <0 5 | 2 |
| Thallium -(ug/l) | <1 | <1 | - | Grab | <1 | 279 2 | <1 | 2 |
| Zinc (ug/l) | - | <4 | - | Grab | <4 | 200.7 | <4 | 1 |
| Cyanide (mg/l) | <0 01 | <0 01 | - | Grab | <0 01 | 335 2 | <0 01 | 2 |
| Mercury (ng/l) | - | 1 51 | 2 08 | Grab | 2.08 | 1631 | 2 08 | 2 |
| **Table 4** | | | | | | | | |
| Chlorine, total residual (mg/l) | <0 08 | 0 21 | - | Grab | 0 21 | 330 5 | 0.21 | 2 |
| Sulfate (mg/l) | 113 | 174 | 234 | Composite | 234 | 375.4 | 234 | 3 |
| **Additional Data From Belmonte Park Laboratories is attached.** | | | | | | | | |
| **Table 5** | | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | | |

Belmonte Park Environmental Laboratories

AMERICAN ELECTRIC POWER (AEP)
1 COOK PLACE
BRIDGMAN, MICHIGAN 49106

Attn: BLAIR ZORDELL

Purchase Order: 4307976
Invoice Number:

Order #: 99-02-060
Date: 03/16/99 09:22
Work ID: OUTFALL 001 - 00C
Date Received: 02/02/99
Date Completed: 03/16/99

Client Code: AEP_4

ND= NONE DETECTED
OHIO CERT.# 12345

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | |
|---|---|---|
| 01 | OUTFALL 001 | 02/01/99 |
| 02 | OUTFALL 001 | 02/01/99 |
| 03 | OUTFALL 001 | 02/01/99 |
| 04 | OUTFALL 001 | 02/01/99 |
| 05 | OUTFALL 001 | 02/01/99 |
| 06 | OUTFALL 001 | 02/01/99 |
| 07 | OUTFALL 001 | 02/01/99 |
| 08 | OUTFALL 001 | 02/01/99 |
| 09 | OUTFALL 001 | 02/01/99 |
| 10 | OUTFALL 001 | 02/01/99 |
| 11 | OUTFALL 001 | 02/01/99 |
| 12 | OUTFALL 001 | 02/01/99 |
| 13 | OUTFALL 001 | 02/01/99 |
| 14 | OUTFALL 001 | 02/01/99 |
| 15 | OUTFALL 001 | 02/01/99 |
| 16 | OUTFALL 00G | 02/01/99 |
| 17 | OUTFALL 00G | 02/01/99 |
| 18 | OUTFALL 00G | 02/01/99 |
| 19 | OUTFALL 00G | 02/01/99 |
| 20 | OUTFALL 00G | 02/01/99 |
| 21 | OUTFALL 00G | 02/01/99 |
| 22 | OUTFALL 00G | 02/01/99 |
| 23 | OUTFALL 00G | 02/01/99 |
| 24 | OUTFALL 00G | 02/01/99 |
| 25 | OUTFALL 00G | 02/01/99 |
| 26 | OUTFALL 00G | 02/01/99 |
| 27 | OUTFALL 00G | 02/01/99 |
| 28 | OUTFALL 00G | 02/01/99 |
| 29 | OUTFALL 00G | 02/01/99 |
| 30 | OUTFALL 00G | 02/01/99 |
| 31 | OUTFALL 00C | 02/01/99 |
| 32 | OUTFALL 00C | 02/01/99 |
| 33 | OUTFALL 00C | 02/01/99 |
| 34 | OUTFALL 00C | 02/01/99 |
| 35 | OUTFALL 00C | 02/01/99 |
| 36 | OUTFALL 00C | 02/01/99 |
| 37 | OUTFALL 00C | 02/01/99 |
| 38 | OUTFALL 00C | 02/01/99 |
| 39 | OUTFALL 00C | 02/01/99 |
| 40 | OUTFALL 00C | 02/01/99 |
| 41 | OUTFALL 00C | 02/01/99 |
| 42 | OUTFALL 00C | 02/01/99 |
| 43 | OUTFALL 00C | 02/01/99 |
| 44 | OUTFALL 00C | 02/01/99 |
| 45 | OUTFALL 00C | 02/01/99 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Matt Lake. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

M. Lake

Certified By
MATT LAKE

Belmonte Park
Environmental
Laboratories



## TEST RESULTS BY SAMPLE

**Sample: 01A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| 5day CBOD, | EPA 405.1 | 3 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, | EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 02A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| COD, | EPA 410.4 | 6 | 5 | mg/L | 02/19/99 | LG |
| TOC, | EPA 415.1 | 4.5 | 1 | mg/L | 02/09/99 | JW |

**Sample: 03A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| AMMONIA N, | EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 05A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | | - | | - | | SD |
| EXTRACTION, | EPA 608 | - | | - | | SD |

**Sample: 06A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| ALUMINUM, | EPA 200.7 | 0.05 | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, | EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, | EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, | EPA 200.7 | 0.021 | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, | EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, | EPA 200.7 | 0.07 | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, | EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, | EPA 220.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, | EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/12/99 | RJE |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| MAGNESIUM, | EPA 200.7 | 11 | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | 0.12 | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

**Sample: 07A OUTFALL 001** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 08A OUTFALL 001** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 09A OUTFALL 001** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 10A OUTFALL 001** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.38 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | 0.37 | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

Belmonte Park Environmental Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

**Sample: 11A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 12A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 13A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 14A OUTFALL 001 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 16A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 4 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 17A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | 2.1 | 1 | mg/L | 02/09/99 | JW |

Belmonte Park Environmental Laboratories

Order # 99-02-060
03/16/99 09:22



## TEST RESULTS BY SAMPLE

**Sample: 18A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 20A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

**Sample: 21A OUTFALL 00G** 02/01/99 **Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ALUMINUM, EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, EPA 200.7 | 0.022 | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, EPA 200.7 | 0.06 | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, EPA 220.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| MAGNESIUM, EPA 200.7 | 12 | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, WATER | - | | - | | EP |
| MOLYBDENUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, EPA 200.7 | 0.14 | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

**Sample: 22A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/15/99 | LG |

**Sample: 23A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 24A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 25A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.50 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 26A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| OIL & GREASE, | EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 27A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| GROSS ALPHA, | IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, | IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

Belmonte Park Environmental Laboratories



TEST RESULTS BY SAMPLE

**Sample: 28A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | 113 | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 29A OUTFALL 00G 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 31A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 4 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 32A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | BDL | 1 | mg/L | 02/09/99 | JW |

**Sample: 33A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 35A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



## TEST RESULTS BY SAMPLE

**Sample: 36A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| ALUMINUM, | EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| ANTIMONY, | EPA 204.2 | 0.002 | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, | EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, | EPA 200.7 | BDL | 0.005 | mg/L | 02/11/99 | RJE |
| BERYLLIUM, | EPA 200.7 | BDL | 0.001 | mg/L | 02/11/99 | RJE |
| BORON, | EPA 200.7 | BDL | 0.05 | mg/L | 02/12/99 | RJE |
| CADMIUM, | EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COBALT, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| COPPER, | EPA 220.2 | 0.012 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| LEAD, | EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| MAGNESIUM, | EPA 200.7 | BDL | 1 | mg/L | 02/12/99 | RJE |
| MANGANESE, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/11/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/11/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/11/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/11/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/12/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/11/99 | RJE |

**Sample: 37A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 38A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

**Sample: 39A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/03/99 | ML |

**Sample: 40A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| NITRATE-NITRITE N | BDL | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, EPA 351.3 | BDL | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 41A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/10/99 | PT |

**Sample: 42A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 43A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 44A OUTFALL 00C 02/01/99 Collected: 02/01/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/98 | EM |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 112 | 76 - 114 |
| D8-TOLUENE | 94 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: **OUTFALL 001** 02/01/99 Lab No: **04A**
Test Description: **EPA 624** Method: **624** Test Code: 624_X
Collected: **02/01/99** Category: **AQUEOUS**

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 96 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020934
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 85 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 72 | 43 | - | 116 |
| p-TERPHENYL-d14 | 95 | 33 | - | 141 |
| PHENOL-d6 | 46 | 10 | - | 94 |
| 2-FLUOROPHENOL | 74 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 50 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022524
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 90 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 93 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020913
UNITS ug/L



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 001 02/01/99 Lab No: 15A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 65 | 35 - 114 |
| 2-FLUOROBIPHENYL | 78 | 43 - 116 |
| p-TERPHENYL-d14 | 113 | 33 - 141 |
| PHENOL-d6 | 25 | 10 - 94 |
| 2-FLUOROPHENOL | 30 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 93 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206501W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 113 | 76 - 114 |
| D8-TOLUENE | 92 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 93 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020935
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL)PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-d5 | 64 | 35 - 114 |
| 2-FLUOROBIPHENYL | 65 | 43 - 116 |
| p-TERPHENYL-d14 | 77 | 33 - 141 |
| PHENOL-d6 | 35 | 10 - 94 |
| 2-FLUOROPHENOL | 33 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 65 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022525
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 89 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 94 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020914
UNITS ug/L

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G 02/01/99 Lab No: 30A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 60 | 35 - 114 |
| 2-FLUOROBIPHENYL | 78 | 43 - 116 |
| p-TERPHENYL-d14 | 115 | 33 - 141 |
| PHENOL-d6 | 28 | 10 - 94 |
| 2-FLUOROPHENOL | 35 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 85 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206504W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 34A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE . | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 114 | 76 - 114 |
| D8-TOLUENE | 94 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 34A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/01/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 93 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020936
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-060
03/16/99 09:22



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL) ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL) PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/01/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-d5 | 77 | 35 - 114 |
| 2-FLUOROBIPHENYL | 66 | 43 - 116 |
| p-TERPHENYL-d14 | 82 | 33 - 141 |
| PHENOL-d6 | 62 | 10 - 94 |
| 2-FLUOROPHENOL | 71 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 66 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022526
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park Environmental Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 0.10 |
| PCB-1221 | BDL | 0.20 |
| PCB-1232 | BDL | 0.10 |
| PCB-1242 | BDL | 0.10 |
| PCB-1248 | BDL | 0.10 |
| PCB-1254 | BDL | 0.10 |
| PCB-1260 | BDL | 0.10 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 93 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 92 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020915
UNITS ug/L


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-060
03/16/99 09:22

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 35A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/01/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT


11 East Main Street
Dayton, Ohio 45426
(937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-060 
03/16/99 09:22

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/01/99 Lab No: 45A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/01/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 63 | 35 - 114 |
| 2-FLUOROBIPHENYL | 70 | 43 - 116 |
| p-TERPHENYL-d14 | 100 | 33 - 141 |
| PHENOL-d6 | 25 | 10 - 94 |
| 2-FLUOROPHENOL | 38 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 83 | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206503W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

| Facility name: | NPDES Permit number. | Outfall Number. |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00G |

**Addendum to NPDES Renewal Application Section III.B.10**
**Toxic Pollutant Reasonable Potential Effluent Data**

Sampling results indicate the presence of toxic pollutants in the Cook Nuclear Plant discharges as follows:

Strontium was detected in Outfall 00G (Reverse Osmosis System Reject). There are no plant processes that use strontium. Strontium is a trace element (21st among the elements in the earth's crust) usually associated with calcium and barium minerals in veins in limestone. The chief use of strontium is in fireworks, red signal flares, or on tracer bullets. Therefore, we do not believe that there is reasonable potential for strontium to be present in these discharges as a result of plant operations. We believe that strontium is present in the intake.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00G |

9. WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the DEQ under separate correspondence. The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this application

A. Are there water treatment additives in the discharge from this facility?

☐ No, proceed to item 4.

☒ Yes

B. Have these water treatment additives been previously approved?

☐ No, continue with C. below.

☒ Yes Submit a list of the previously approved water treatment additives and the date they were approved. The information listed in C 1-8 must be updated if it has changed since the previous approval.

C Submit a list of water treatment additives that are or may be discharged from the facility. Applicants must submit the information listed below for each additive.

1. The water treatment additive Material Safety Data Sheet
2. The proposed water treatment additive discharge concentration.
3. The discharge frequency (i e., number of hours per day, week, etc ).
4. The outfall the water treatment additive is to be discharged from.
5. The type of removal treatment, if any, that the water treatment additive receives prior to discharge.
6. The water treatment additive function (i e , microbiocide, flocculant, etc )
7. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Ceriodaphnia sp , Daphnia sp , or Simocephalus sp ).
8. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323 1057(2)(a) of the Water Quality Standards Examples of tests that would meet this requirement include a 96-hour LC50 for a rainbow trout, bluegill, or fathead minnow.

The required toxicity information (described in items 7 and 8 above) is currently available in the SWQD files for the water treatment additives listed on the DEQ's Internet page **http://www.deq.state.mi.us/swq/gleas/docs/wta/WTAlist.doc.** If you intend to use one of the water treatment additives on this list, only the information in items 1 through 6 above needs to be submitted to the SWQD.

**Note:** The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive

10. WHOLE EFFLUENT TOXICITY TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results below unless the test has been submitted to the department in the last 5 years.

NO

Michigan Department of Environmental Quality-Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

**PLEASE TYPE OR PRINT**

| FACILITY NAME | NPDES or COC PERMIT NUMBER | Outfall Number |
|---|---|---|
| **Donald C. Cook Nuclear Plant** | **MI0005827** | **00G** |

9. WATER TREATMENT ADDITIVES

| Water Treatment Additive | Approval Date |
|---|---|
| Hydrochloric Acid (pH control) | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| Sulfunc Acid | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Sodium Hydroxide | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Sodium Bisulfite | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| Citric Acid | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| Phosphoric Acid | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| Tide Detergent or equivalent | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Section III.B
# Outfall 00H

DEQ

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

nplete a separate Section III.B - Outfall Information (pages 26-31) for each outfall at the facility Make copies of this blank section of the application for additional outfalls as necessary.

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

1. OUTFALL INFORMATION (see page 25 for instruction on completion of this page)

| | | | | | |
|---|---|---|---|---|---|
| A. | Watershed: Lower St Joseph | | | | |
| B. | Receiving Water: Lake Michigan | | | | |
| C. | County: Berrien | | Township: Lake | | |
| D. | ¼, ¼: SW | ¼: NW | Section: 06 | Town: 06S | Range: 19W |
| E. | Latitude: 41 58' 30" | | Longitude: 86 34' 30" | | |

F. Type of Wastewater Discharged (Check all that apply to this outfall)

- ☐ Contact Cooling
- ☐ Sanitary Wastewater
- ☐ Groundwater Cleanup
- ☐ Storm Water (regulated)
- ☒ Noncontact Cooling
- ☒ Process Wastewater
- ☐ Hydrostatic Pressure Test
- ☐ Storm Water (not regulated)
- ☐ Storm water subject to effluent guidelines (indicate under which category) ____
- ☐ Other – specify (see "Table 8 - Other Common Types of Wastewater" in appendix) ____

J. What is the maximum Facility Design Flow Rate 2.6 MGD

G What is the maximum discharge flow authorized for this outfall. Seasonal Dischargers ____ MGY Continue with Item H.

Continuous Dischargers 2.6 MGD Continue with Item I.

H. Seasonal Discharge

List the discharge periods (by month) and the volume discharged in the space provided below.

| From | Through | Discharge Volume | Annual Total |
|---|---|---|---|
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |
| From | Through | Discharge Volume | |

I Continuous Discharge

How often is there a discharge from this outfall (on the average)? 24 Hours/Day 365 Days/Year

**Batch dischargers must provide the following additional information:**

Is there effluent flow equalization? ☐ Yes ☐ No

Batch Peak Flow Rate ____ Number of batches discharged per day: ____

| | Minimum | Average | Maximum |
|---|---|---|---|
| Batch Volume (gallons) | | | |
| Batch Duration (minutes) | | | |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

'ASE TYPE OR PRINT

| 'ILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

2. PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE

This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility. Page 7 of the appendix contains an abbreviated list of various industries and the types of information each shall report in this application. For assistance call the Permits Section. All industries shall provide the name of each process and the SIC or the NAICS code for the process. If the wastestream is not regulated under federal categorical standards, the applicant shall report all pollutants which have the reasonable potential to be present in the discharge. To submit additional information see page ii, item 8.

PROCESS INFORMATION

A. Name of the process contributing to the discharge. Steam electric

B. SIC or NAICS code 4911

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported). See various contributing waste streams in Section I, Item 10.

PROCESS INFORMATION

A Name of the process contributing to the discharge: _____

B. SIC or NAICS code. _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

PROCESS INFORMATION

A. Name of the process contributing to the discharge. _____

B. SIC or NAICS code _____

C Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported)

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported).

PROCESS INFORMATION

A. Name of the process contributing to the discharge: _____

B. SIC or NAICS code: _____

C. Describe the process and provide measures of production (see the instructions to determine the appropriate information to be reported):

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

### INSTRUCTIONS FOR COMPLETING SECTION III, ITEM B.3:

In accordance with 40 CFR 122 21, all applicants must report $CBOD_5$, Chemical Oxygen Demand, Total Organic Carbon, Total Suspended Solids, Ammonia as N, Temperature (both summer and winter), and pH. The applicant may, however, request that reporting of data for one or more of these required parameters be waived. Such request must be supported by adequate rationale The request shall be included as an attachment to this application.

Report available discharge data for the parameters listed. Actual data shall be provided for existing discharges and expected or estimated data provided for proposed discharges Please include an explanation if "Pollution Prevention" is expected to provide reduction of pollutants. See Page 8 of the appendix for a list of specific parameters for which data must be provided for specific types of discharges (e.g., noncontact cooling waters, gasoline groundwater cleanups, etc.). For assistance in determining the appropriate parameters to report, call the Permits Section.

If data are available for other parameters not listed in Section III.B.3 , the applicant shall report these data in the blank spaces provided or attach the information to this application on 8½" x 11" paper.

Report all data in the units provided and for the sample types specified in the table. If more than one option is available, check the appropriate box. The units are as follows: µg/l = micrograms per liter, mg/l = milligrams per liter, °F = degrees Fahrenheit, °C = degrees Celsius **See page ii number 5 for analytical requirements.**

To analyze for pH, temperature, total residual chlorine, oil and grease, and fecal coliform use **Grab Samples** unless other frequency-sample type analyses are available. To analyze for total $BOD_5$, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use **24-hour composite samples** unless other frequency-sample type analyses are available

For two or more substantially identical outfalls, permission may be requested from the appropriate district office to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the district office, on a separate sheet attached to the application form, identify which outfall was sampled and describe why the outfalls which were not sampled are substantially identical to the outfall which was sampled. See pages ii and iii for sampling definitions, including "maximum daily concentration", and "maximum monthly concentration".

REPORTING OF INTAKE DATA

Applicants are required to report intake water data when they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters remaining after treatment which is not removed by the treatment system. NPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122 45(g)) To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information shall be submitted for each parameter.

a) A statement that the intake water is drawn from the body of water into which the discharge is made. If the discharge is not to the same body of water from which the water is withdrawn, the facility is not eligible for net limitations.

b) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Limitations for the net removal of pollutants are adjusted only to the extent that the pollutant is not removed.

c) When applicable (for example, when the pollutant represents a class of compounds, e.g , $BOD_5$, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge Limitations are adjusted only to the extent that the concentrations of the intake pollutants vary from the discharged pollutants

**Note:** Applicants for groundwater remediation discharges should also report the intake characteristics of contaminated groundwater.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

"ASE TYPE OR PRINT

| ILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

3. WASTEWATER CHARACTERISTICS - CONVENTIONAL POLLUTANTS - Instructions for completing this page are on the facing page.

☒ Check this box if additional information is included as an attachment. To submit additional information see page ii, item 8.

| Parameter | Maximum Daily Concentration | Maximum Monthly Concentration | Units | Number of Analyses | Sample Type |
|---|---|---|---|---|---|
| Biochemical Oxygen Demand - five day ($BOD_5$) | 26 7 | 26.7 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| COD (Chemical oxygen demand) | 8 07 | 8 07 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| TOC (Total organic carbon) | 2 | 2 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Ammonia Nitrogen (as N) | 3 88 | 3 88 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Total Suspended Solids | 15 | 15 | mg/l | 2 | ☐ Grab ☒ 24 Hr Comp |
| Total Dissolved Solids | 4104 | 3108 | mg/l | 52 | ☐ Grab ☒ 24 Hr Comp |
| Total Phosphorus (as P) | 0.5 | 0 09 | mg/l | 98 | ☐ Grab ☒ 24 Hr Comp |
| Fecal Coliform Bacteria (report geometric means) | maximum-7day NA | NA | counts/100ml | NA | Grab |
| I Residual Chlorine | <0.08 | <0.08 | ☒ mg/l ☐ µg/l | 2 | Grab |
| Dissolved Oxygen | minimum daily NA | ~~Do Not Use~~ | mg/l | NA | ☐ Grab ☐ 24 Hr Comp |
| pH (report maximum and minimum of individual samples) | minimum 2 4 | maximum 9.1 | standard units | 23 | ☒ Grab ☐ 24 Hr Comp |
| Temperature, Summer | *NA | *NA | ☐ °F ☐ °C | *NA | ☐ Grab ☐ 24 Hr Comp |
| Temperature, Winter | *NA | *NA | ☐ °F ☐ °C | *NA | ☐ Grab ☐ 24 Hr Comp |
| Oil & Grease | 8 9 | 6 | mg/l | 120 | Grab |
| Hydrazine | 5 54 | 14 04 | mg/l | 120 | ☒ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| See Attached for additional Data | | | | | ☐ Grab ☐ 24 Hr Comp |
| * NA - Internal Outfall | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Comp |
| | | | | | ☐ Grab ☐ 24 Hr Com |
| | | | | | ☐ Grab ☐ 24 Hr Comp |

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C Cook Nuclear Plant | MI0005827 | 00H |

4 PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for selected organic pollutants identified in Table 2 (as determined from Table 1, Testing Requirements for Organic Toxic Pollutants by Industrial Category), and all the pollutants identified in Table 3 Existing primary industries must also provide the results of at least one effluent analysis for any other chemical listed in Table 2 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3.

New primary industries that propose to discharge process wastewater must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

5. DIOXIN AND FURAN CONGENER INFORMATION

Existing industries that use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid, (Silvex, 2,3,5-TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel), 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent, must submit the results of at least one effluent analysis for the dioxin and furan congeners listed in Table 6 All effluent analyses for dioxin and furan congeners must be conducted using EPA Method 1613.

In addition, submit the results of all other effluent analyses performed within the last 5 years for any dioxin and furan congener listed in Table 6

New industries that expect to use or manufacture 2,3,5-trichlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy) propanoic acid (Silvex, 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothionate (Ronnel), 2,4,5-trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has reason to believe that 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is present in facility effluent must provide estimated effluent concentrations for the dioxin and furan congeners listed in Table 6

6 OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing secondary industries, or existing primary industries that discharge non-process wastewater, must submit the results of at least one effluent analysis for any chemical listed in Tables 2 and 3 known or believed to be present in facility effluent

In addition, submit the results of all other effluent analyses performed within the last 5 years for any chemical listed in Tables 2 and 3

New secondary industries, or new primary industries that propose to discharge non-process wastewater, must provide an estimated effluent concentration for any chemical listed in Tables 2 and 3 expected to be present in facility effluent.

7. ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION

All existing industries, regardless of discharge type, must provide the results of at least one analyses for any chemical listed in Table 4 known or believed to be present in facility effluent, and a measured or estimated effluent concentration for any chemical listed in Table 5 known or believed to be present in facility effluent In addition, submit the results of any effluent analysis performed within the last 5 years for any chemical listed in Tables 4 and 5.

New industries, regardless of discharge type, must provide an estimated effluent concentration for any chemical listed in Tables 4 and 5 expected to be in facility effluent

8. INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED

New or existing industries, regardless of discharge type, must provide a measured or estimated effluent concentration for any toxic or otherwise injurious chemicals known or believed to be present in facility effluent that have not been previously identified in this application. Quantitative effluent data that are less than 5 years old for these chemicals must be reported.

NOTE: All effluent data submitted in response to questions 4, 5, 6, 7, and 8 above should be recorded on page 31. To submit additional information see page ii, item 8 If the effluent concentrations are estimated, place an E in the "Analytical Method" column. The following fields must be completed for each data row Parameter, CAS No , Concentration(s), Sample Type, Analytical Method, Quantification Level and Detection Level. See page ii, number 5 for analytical test requirements

Michigan Department of Env\ :mental Quality- Water Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

| SAMPLE DATE → | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PARAMETER | CAS No. | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Conc. (ug/l) | Sample Type | Analytical | QL | DL |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| See Attached | | | | | | | | | | | | | | | |
| for additional | | | | | | | | | | | | | | | |
| data. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Additional Sample Data
Summary Sheet



**For Outfall 00H**

| Parameter | 2/3/99 | 3/26/02 | 5/30/02 | Sample type | Max Daily | Analytical Method | Max monthly | # of Analyses |
|---|---|---|---|---|---|---|---|---|
| **Table 2** | | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | | |
| **Table 3** | | | | | | | | |
| Antimony (ug/l) | <1 | <1 | - | Grab | <1 | 204 2/200.8 | <1 | 2 |
| Arsenic (ug/l) | <1 | 3.27 | <1 | Grab | 3 27 | 206 2/200.8 | 3 27 | 3 |
| Beryllium (ug/l) | <1 | <0.2 | - | Grab | <1 | 200.7/200.8 | <1 | 2 |
| Cadmium (ug/l) | <0 2 | <0.2 | - | Grab | <0 2 | 213.2/200 8 | <0 2 | 2 |
| Chromium (ug/l) | <10 | <10 | - | Grab | <10 | 200.7/200 8 | <10 | 2 |
| Copper (ug/l) | 4 | 7.26 | 20 | Grab | 20 | 220 2/200 8 | 20 | 3 |
| Lead (ug/l) | <1 | 3.49 | 3 | Grab | 3.49 | 239 2/200 8 | 3.49 | 3 |
| Nickel (ug/l) | <5 | <5 | - | Grab | <5 | 249 2/200.8 | <5 | 2 |
| Total Phenols (ug/l) | 30 | - | - | Grab | 30 | 420 1 | 30 | 1 |
| Selenium (ug/l) | - | <1 | - | Grab | <1 | 200.7/200 8 | <1 | 1 |
| Silver(ug/l) | <0 5 | <0.5 | - | Grab | <0 5 | 272.2/200 8 | <0.5 | 2 |
| Thallium -(ug/l) | <1 | <1 | - | Grab | <1 | 279 2/200 8 | <1 | 2 |
| Zinc (ug/l) | - | 17 | 11 | Grab | 17 | 200.7/200 8 | 17 | 2 |
| Cyanide (mg/l) | - | <0 005 | - | Grab | <0.005 | 335.2/335 3 | <0.005 | 1 |
| Mercury (ng/l) | - | 10 7 | 4.7 | Grab | 10.7 | 1631 | 10.7 | 2 |
| **Table 4** | | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | | |
| **See Attached data set.** | | | | | | | | |
| **Table 5** | | | | | | | | |
| **See Attached data set from Belmonte Park Laboratories.** | | | | | | | | |
| **See Attached data set.** | | | | | | | | |

## NPDES Application Section III.B.6&7 Table 4 data for Outfall OOH

Analyzed by Cook Plant Lab.

(TRS Discharge to Groundwater operating data)

| Date | O&G mg/l | Date | O&G mg/l | Sample type | Analytical method | QL | DL |
|---|---|---|---|---|---|---|---|
| Jan-99 | <5.0 | Nov-99 | <5.0 | Grab | USEPA 413 1 | 15 | 5 |
| | <5.0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| Feb-99 | <5 0 | Dec-99 | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| Mar-99 | <5 0 | Jan-00 | <5 0 | | | | |
| | <5.0 | | <5 0 | | | | |
| | <5.0 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | <5 0 | Feb-00 | <5.0 | | | | |
| Apr-99 | <5 0 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5.0 | | | | |
| May-99 | <5 0 | | <5 0 | | | | |
| | 6 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5.0 | Apr-00 | <5.0 | | | | |
| Jun-99 | 8 9 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | May-00 | <5 0 | | | | |
| Jul-99 | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| Aug-99 | <5.0 | Jun-00 | <5.0 | | | | |
| | <5.0 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | <5.0 | | <5 0 | | | | |
| Sep-99 | <5 0 | Jul-00 | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | | <5 0 | | | | |
| | <5 0 | Aug-00 | <5 0 | | | | |
| Oct-99 | <5.0 | | <5 0 | | | | |
| | <5.0 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | <5 0 | | <5.0 | | | | |
| | | Sep-00 | <5.0 | | | | |
| | | | <5 0 | | | | |
| | | | <5 0 | | | | |
| | | | <5 0 | | | | |
| | | | <5 0 | | | | |
| | | Oct-00 | <5 0 | | | | |
| | | | <5.0 | | | | |
| | | | <5.0 | | | | |
| | | | <5.0 | | | | |

## NPDES Application Section III.B.6&7 Table 4 data for Outfall OOH

Analyzed by Cook Plant Lab

(TRS Discharge to Groundwater operating data)

| Date | Sulfate mg/l | Date | Sulfate mg/l |
|---|---|---|---|
| Jan-01 | 39 | Dec-01 | 41 |
| | 42 | | 41 |
| | 74 | | 42 |
| | 41 | | 41 |
| | 55 | | 41 |
| | 43 | Jan-02 | 43 |
| | 47 | | 34 |
| | 46 | | 38 |
| | 1550 | | 25 |
| | 196 | | 34 |
| Feb-01 | 49 | Feb-02 | 27 |
| | 50 | | 26 |
| | 41 | | 35 |
| | 39 | | 34 |
| Mar-01 | 44 | Mar-02 | 28 |
| | 125 | | 47 |
| | 33 | | 64 3 |
| | 46 | | 36 |
| Apr-01 | 37 | | 40 |
| | 45 | Apr-02 | 44 |
| | 48 | | 28 |
| | 760 | | 23 |
| May-01 | 600 | | 23 |
| | 34 | | 38 |
| | 96 | May-02 | 33 |
| | 47 | | 31 |
| | 43 | | 80 |
| | 34 | | 27 |
| | 43 | Jun-02 | 23 |
| Jun-01 | 50 | | 92 |
| | 39 | | 39 |
| | 37 | | 47 |
| | 39 | Jul-02 | 38 |
| Jul-01 | 26 | | 53 |
| | 29 | | 48 |
| | 38 | | 35 |
| | 34 | | 20 |
| Aug-01 | 37 | Aug-02 | 29 |
| | 902 | | 49 |
| | 74 | | 57 |
| | 42 | | 49 |
| | 41 | Sep-02 | 53 |
| | 38 | | 42 |
| | 26 | | 41 |
| Sep-01 | 24 | | 52 |
| | 26 | Oct-02 | 52 |
| | 21 | | 47 |
| | 700 | | 50 |
| Oct-01 | 19 | | 61 |
| | 31 | | 70 |
| | 28 | Nov-02 | 84 |
| | 38 | | 53 |
| | 31 | | 41 |
| Nov-01 | 45 | | 48 |
| | 37 | Dec-02 | 249 |
| | 34 | | 64 |
| | 37 | | |
| | 43 | | |

| Sample type | Analytical method | QL | DL |
|---|---|---|---|
| Composite | USEPA 375 4 | 30 | 10 |

## NPDES Application Section III.B.6&7 Table 4 data for Outfall OOH

Analyzed by Cook Plant Lab.

(TRS Discharge to Groundwater operating data)

| Date | Total Phosphorus mg/l | Date | Total Phosphorus mg/l |
|---|---|---|---|
| Jan-99 | 0 04 | Feb-00 | 0.02 |
| | 0.01 | | <0 01 |
| | 0.01 | | 0 01 |
| | 0 02 | | 0 02 |
| Feb-99 | 0 01 | Mar-00 | <0 01 |
| | 0 01 | | <0 01 |
| | 0 02 | | <0.01 |
| | 0 01 | | <0.01 |
| Mar-99 | 0 01 | | <0.01 |
| | 0 01 | | 0.02 |
| | 0.02 | Apr-00 | 0 02 |
| | 0 01 | | 0 02 |
| | <0 01 | | <0 01 |
| Apr-99 | 0 03 | | 0.01 |
| | <0 01 | May-00 | 0.01 |
| | 0.02 | | <0 01 |
| | 0.01 | | <0 01 |
| May-99 | <0 01 | | <0 01 |
| | 0 02 | | 0 01 |
| | 0 02 | | 0 01 |
| | 0 02 | Jun-00 | 0 02 |
| Jun-99 | 0 02 | | <0.01 |
| | 0 01 | | <0.01 |
| | 0 01 | | <0.01 |
| | <0 01 | Jul-00 | 0 01 |
| | 0 01 | | <0 01 |
| Jul-99 | 0 02 | | 0 01 |
| | 0 01 | | 0 03 |
| | 0 03 | Aug-00 | <0 01 |
| | 0.01 | | <0 01 |
| | 0.45 | | 0.02 |
| | 0 04 | | 0.04 |
| Aug-99 | 0 01 | | <0 01 |
| | 0 01 | Sep-00 | 0 01 |
| | 0 01 | | <0 01 |
| | 0 01 | | 0 02 |
| Sep-99 | 0 01 | | 0.01 |
| | 0 03 | Oct-00 | <0.01 |
| | 0 02 | | 0 02 |
| | 0.02 | | <0 01 |
| | 0 02 | | |
| Oct-99 | 0.02 | | |
| | 0.02 | | |
| | 0 01 | | |
| | 0 05 | | |
| Nov-99 | 0 01 | | |
| | <0.01 | | |
| | 0 02 | | |
| | 0 01 | | |
| Dec-99 | 0 01 | | |
| | 0.01 | | |
| | 0 02 | | |
| | <0 01 | | |
| | 0.03 | | |
| | 0 45 | | |
| Jan-00 | 0 05 | | |
| | 0.28 | | |
| | 0 03 | | |
| | 0 07 | | |

| Sample type | Analytical method | QL | DL |
|---|---|---|---|
| Composite | USEPA 365 1 | 0.3 | 0.1 |

## NPDES Application Section III.B.6&7 Table 5 data for Outfall OOH

Analyzed by Cook Plant Lab.

(TRS Discharge to Groundwater operating data)

| Date | Hydrazine ug/l | Date | Hydrazine ug/l | Date | Hydrazine ug/l |
|---|---|---|---|---|---|
| Oct-00 | <10 | | <10 | | <3 |
| | 14 4 | Jul-01 | <10 | | <3 |
| | <10 | | <10 | | <3 |
| | <10 | | <10 | May-02 | 8100 |
| | <10 | | <3 | | 5 |
| Nov-00 | <10 | Aug-01 | <3 | | <3 |
| | <10 | | <3 | | 14040 |
| | 361 | | <3 | Jun-02 | 159 |
| | <10 | | <3 | | 186 |
| Dec-00 | 445 | | <3 | | 35 |
| | 37.9 | | <3 | | <3 |
| | 48 | Sep-01 | 152 | Jul-02 | <3 |
| | <10 | | 196 | | <3 |
| Jan-01 | <10 | | <3 | | <3 |
| | <10 | | 347 | | 3 |
| | <10 | Oct-01 | 266 | | 4640 |
| | <10 | | 341 | Aug-02 | <3 |
| | <10 | | <3 | | <3 |
| | <10 | | <3 | | <3 |
| Feb-01 | <10 | | <3 | | <3 |
| | <10 | Nov-01 | <3 | Sep-02 | <3 |
| | 82 | | 7 2 | | 11 |
| | <10 | | <3 | | 22 |
| Mar-01 | <10 | | <3 | | 8 |
| | <10 | Dec-01 | <3 | | <3 |
| | <10 | | <3 | Oct-02 | <3 |
| | <10 | | <3 | | <3 |
| Apr-01 | 19 6 | | <3 | | <3 |
| | <10 | Jan-02 | <3 | | <3 |
| | <10 | | <3 | Nov-02 | <3 |
| | <10 | | <3 | | 19 5 |
| | <10 | | 206 | | 15.3 |
| | <10 | | 14 | | <3 |
| May-01 | <10 | Feb-02 | 14 | Dec-02 | <3 |
| | <10 | | 9 | | <3 |
| | <10 | | <3 | | |
| | <10 | | 35 | | |
| | <10 | Mar-02 | <3 | | |
| Jun-01 | | | <3 | | |
| | <10 | | <3 | | |
| | <10 | | 15 | | |
| | <10 | Apr-02 | 4.4 | | |
| | <10 | | <3 | | |

| Sample type | Analytical method | QL | DL |
|---|---|---|---|
| Grab | ASTMD 1385 | 3 | 10 |

# ANALYTICAL RESULTS

| Data Sheet 2 | NPDES Results | Page: 7 |
|---|---|---|

Sample Identification: TRS GRAB
Sample Date: 3-26-02
Received Date/Time: NA
Analysis Date 3-26-02

Sampler's Initials: DW
Sample Time: 0835
Receiver's Initials: NA

## CALCULATIONS/RESULTS

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| TDS | $(W_f)$ - $(W_i)$ x 1000 / (V) | = ppm | |
| STD# | $(W_f)$ - $(W_i)$ x 1000 / (V) | = ppm | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |
| O&G | R = $(W_f)$ - $(W_i)$ | B = $(W_f)$ - $(W_i)$ | |
| | (R) - (B) / (V) | = ppm | |
| STD# | R = $(W_f)$ - $(W_i)$ | B = $(W_f)$ - $(W_i)$ = mg. | |
| | (R) - (B) / (V) | = ppm | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |
| TSS | (A) - (B) x 1000 / (C) | = ppm | |
| TSS | (A) - (B) x 1000 / (C) | = ppm | |
| STD# | (A) - (B) x 1000 / (C) | = ppm | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |
| $SO_4$ | (Dilution Factor) x (Sample Reading) | = mg/L(ppm) | |
| STD# | (Dilution Factor) x (Standard Reading) | = mg/L(ppm) | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |
| PH | Sample Temperature: 16 °C Result = 8.02 | | |
| STD# 4461/4213 | Theoretical Value: 7.00/4.00 Standard Temperature: 22 Result = 7.08/9.02 | | |
| Analysis Time: 0848 | Equip ID.: CPC-151 | Analyst's Initials: DW | Results in Spec N/A |
| Total P | Result = ppm STD#: Result = ppm | | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |

| Analysis | Analysis Time | Equipment ID | Results ppm | Analysts Initials | CDMS Trend |
|---|---|---|---|---|---|
| TRC | 0900 | DR 2010-04 | < .08 | DW | NA |
| TRC STD NL5169 NL5111 | ↓ | ↓ | 1.07/1.50 | ↓ | ↓ |

Comments/Corrective Actions/Notifications:

Working Copy
Verified By:
Initial DW Date 3-26-02

## NPDES RESULTS

Sample Identification: TRS Grab Outfall 002 (OOH)
Sample Date: 2-2-99
Received Date/Time: same
Analysis Date same

Sampler's Initials: AR
Sample Time: 1103
Receiver's Initials:

### CALCULATIONS/RESULTS

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| TDS | $(W_f)$ - $(W_i)$ x 1000 / (V) | = ppm | |
| STD# | $(W_f)$ - $(W_i)$ x 1000 / (V) | = ppm | |
| Analysis Time. | Equip ID.: | Analyst's Initials. | |

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| O&G | R = $(W_f)$ - $(W_i)$ | B = $(W_f)$ - $(W_i)$ | |
| | (R) - (B) | / (V) | = ppm |
| STD# | R = $(W_f)$ - $(W_i)$ | B = $(W_f)$ - $(W_i)$ | = mg |
| | (R) - (B) | / (V) | = ppm |
| Analysis Time: | Equip ID : | Analyst's Initials: | |

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| TSS | (A) - (B) x 1000 / (C) | = ppm | |
| TSS | (A) - (B) x 1000 / (C) | = ppm | |
| STD# | (A) - (B) x 1000 / (C) | = ppm | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| $SO_4$ | (Dilution Factor) x (Sample Reading) | = mg/L(ppm) | |
| STD# | (Dilution Factor) x (Standard Reading) | = mg/L(ppm) | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |

| | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|
| PH | Sample Temperature: | Result= | |
| STD# | Theorencal Value: | Standard Temperature: Result= | |
| Analysis Time: | Equip ID.: | Analyst's Initials: | |

| | | | | CDMS Trend (S)(I)(D) Results in Spec |
|---|---|---|---|---|
| Total P | . Result = | ppm STD#: | Result = ppm | |
| Analysis Time: | Equip ID : | Analyst's Initials: | | |

| Analysis | Analysis Time | Equipment ID | Results | Analysts Initials | CDMS Trend | |
|---|---|---|---|---|---|---|
| TRC 1.0 ppm std | 1100 | DR-2010-3 | 1.03 ppm | AR | | |
| ✓ sample | ✓ | ✓ | *0.02 ppm | AR | | |
| TRS d/c | 1104 | TRS o/c DR pH meter 7.00 | | AR | 2/2/99 | |

Comments/Corrective Actions/Notifications:

* LOQ for Dr 2010-3 is 0.05 ppm

Reviewer's Initials: [illegible]

Belmonte Park Environmental Laboratories

AMERICAN ELECTRIC POWER (AEP)
1 COOK PLACE
BRIDGMAN, MICHIGAN 49106

Attn: BLAIR ZORDELL

Purchase Order: 4307976
Invoice Number:

Order #: 99-02-232
Date: 03/16/99 09:23
Work ID: OUTFALL 00H - 00B (FAX)
Date Received: 02/03/99
Date Completed: 03/16/99

Client Code: AEP_4

ND= NONE DETECTED
OHIO CERT.# 12345

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | | Sample Number | Sample Description | |
|---|---|---|---|---|---|
| 01 | OUTFALL 00H | 02/03/99 | 16 | OUTFALL 00B | 02/03/99 |
| 02 | OUTFALL 00H | 02/03/99 | 17 | OUTFALL 00B | 02/03/99 |
| 03 | OUTFALL 00H | 02/03/99 | 18 | OUTFALL 00B | 02/03/99 |
| 04 | OUTFALL 00H | 02/03/99 | 19 | OUTFALL 00B | 02/03/99 |
| 05 | OUTFALL 00H | 02/03/99 | 20 | OUTFALL 00B | 02/03/99 |
| 06 | OUTFALL 00H | 02/03/99 | 21 | OUTFALL 00B | 02/03/99 |
| 07 | OUTFALL 00H | 02/03/99 | 22 | OUTFALL 00B | 02/03/99 |
| 08 | OUTFALL 00H | 02/03/99 | 23 | OUTFALL 00B | 02/03/99 |
| 09 | OUTFALL 00H | 02/03/99 | 24 | OUTFALL 00B | 02/03/99 |
| 10 | OUTFALL 00H | 02/03/99 | 25 | OUTFALL 00B | 02/03/99 |
| 11 | OUTFALL 00H | 02/03/99 | 26 | OUTFALL 00B | 02/03/99 |
| 12 | OUTFALL 00H | 02/03/99 | 27 | OUTFALL 00B | 02/03/99 |
| 13 | OUTFALL 00H | 02/03/99 | 28 | OUTFALL 00B | 02/03/99 |
| 14 | OUTFALL 00H | 02/03/99 | 29 | OUTFALL 00B | 02/03/99 |
| 15 | OUTFALL 00H | 02/03/99 | 30 | OUTFALL 00B | 02/03/99 |

Enclosed are results of specified samples submitted for analyses. If there are any questions, please contact Matt Lake. Our Ohio EPA Certification numbers are 836 & 837. Any result of "BDL" indicates "BELOW DETECTION LIMIT".

M. Lake

Certified By
MATT LAKE

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 01A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 6 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | 15 | 5 | mg/L | 02/11/99 | KC |

**Sample: 02A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | BDL | 5 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | 2.0 | 1 | mg/L | 02/09/99 | JW |

**Sample: 03A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | BDL | 0.5 | mg/L | 02/11/99 | JB |

**Sample: 05A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

**Sample: 06A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ALUMINUM, EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| ANTIMONY, EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, EPA 200.7 | 0.019 | 0.005 | mg/L | 02/13/99 | RJE |
| BERYLLIUM, EPA 200.7 | BDL | 0.001 | mg/L | 02/13/99 | RJE |
| BORON, EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| CADMIUM, EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| COBALT, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| COPPER, EPA 220.2 | 0.004 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, EPA 200.7 | 0.3 | 0.1 | mg/L | 02/13/99 | RJE |
| LEAD, EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232 
03/16/99 09:23

## TEST RESULTS BY SAMPLE

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| MAGNESIUM, | EPA 200.7 | 8 | 1 | mg/L | 02/15/99 | RJE |
| MANGANESE, | EPA 200.7 | 0.01 | 0.01 | mg/L | 02/13/99 | RJE |
| MERCURY, | EPA 245.1 | BDL | 0.0002 | mg/L | 02/15/99 | RJE |
| METALS DIGESTION, | WATER | - | | - | | EP |
| MOLYBDENUM, | EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| NICKEL, | EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, | EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| SILVER, | EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, | EPA 200.7 | 0.08 | 0.01 | mg/L | 02/15/99 | RJE |
| THALLIUM, | EPA 279.2 | BDL | 0.001 | mg/L | 03/08/99 | RJE |
| URANIUM | EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, | EPA 200.7 | BDL | 0.02 | mg/L | 02/13/99 | RJE |

**Sample: 07A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | BDL | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 08A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | 0.03 | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 09A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/04/99 | ML |

**Sample: 10A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | 0.36 | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | BDL | 0.5 | mg/L | 02/11/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | 0.52 | 0.5 | mg/L | 02/06/99 | JB |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 11A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| OIL & GREASE, EPA 413.1 | BDL | 5 | mg/L | 02/04/99 | PT |

**Sample: 12A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| GROSS ALPHA, IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

**Sample: 13A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | 19 | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 14A OUTFALL 00H 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

**Sample: 16A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| 5day CBOD, EPA 405.1 | 82 | 2 | mg/L | 02/08/99 | PT |
| SUSPENDED SOLIDS, EPA 160.2 | BDL | 5 | mg/L | 02/11/99 | KC |

**Sample: 17A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| COD, EPA 410.4 | 331 | 20 | mg/L | 02/19/99 | LG |
| TOC, EPA 415.1 | 19.9 | 1 | mg/L | 02/09/99 | JW |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

**Sample: 18A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| AMMONIA N, EPA 350.2 | 43.4 | 0.5 | mg/L | 02/12/99 | JB |

**Sample: 20A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| EPA 625 SEMI VOL. EXTRACT | - | | - | | SD |
| EXTRACTION, EPA 608 | - | | - | | SD |

**Sample: 21A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ALUMINUM, EPA 200.7 | 0.21 | 0.05 | mg/L | 02/15/99 | RJE |
| ANTIMONY, EPA 204.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| ARSENIC, EPA 206.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| BARIUM, EPA 200.7 | BDL | 0.005 | mg/L | 02/13/99 | RJE |
| BERYLLIUM, EPA 200.7 | BDL | 0.001 | mg/L | 02/13/99 | RJE |
| BORON, EPA 200.7 | BDL | 0.05 | mg/L | 02/15/99 | RJE |
| CADMIUM, EPA 213.2 | BDL | 0.0002 | mg/L | 03/08/99 | RJE |
| CHROMIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| COBALT, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| COPPER, EPA 220.2 | 0.007 | 0.001 | mg/L | 03/08/99 | RJE |
| IRON, EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| LEAD, EPA 239.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| LITHIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| MAGNESIUM, EPA 200.7 | BDL | 1 | mg/L | 02/15/99 | RJE |
| MANGANESE, EPA 200.7 | BDL | 0.01 | mg/L | 02/13/99 | RJE |
| MERCURY, EPA 245.1 | BDL | 0.0002 | mg/L | 02/15/99 | RJE |
| METALS DIGESTION, WATER | - | | - | | EP |
| MOLYBDENUM, EPA 200.7 | 0.02 | 0.01 | mg/L | 02/13/99 | RJE |
| NICKEL, EPA 249.2 | BDL | 0.005 | mg/L | 03/08/99 | RJE |
| SELENIUM, EPA 200.7 | BDL | 0.1 | mg/L | 02/13/99 | RJE |
| SILVER, EPA 272.2 | BDL | 0.0005 | mg/L | 03/08/99 | RJE |
| STRONTIUM, EPA 200.7 | BDL | 0.01 | mg/L | 02/15/99 | RJE |
| THALLIUM, EPA 279.2 | BDL | 0.001 | mg/L | 03/05/99 | RJE |
| URANIUM EPA 200.7 | BDL | 0.1 | mg/L | 02/15/99 | RJE |
| ZINC, EPA 200.7 | BDL | 0.02 | mg/L | 02/13/99 | RJE |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

**Sample: 22A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| SULFIDE, | EPA 376.1 | 14 | 1 | mg/L | 03/05/99 | LG |
| TOTAL CYANIDE, | EPA 335.2 | BDL | 0.01 | mg/L | 03/04/99 | LG |

**Sample: 23A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| PHENOLICS, | EPA 420.1 | BDL | 0.01 | mg/L | 02/23/99 | JB |

**Sample: 24A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| CHLORINE, RESIDUAL TOTAL | BDL | 0.05 | mg/L | 02/04/99 | ML |

**Sample: 25A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| NITRATE-NITRITE N | | BDL | 0.2 | mg/L | 02/05/99 | LG |
| ORGANIC NITROGEN | | 10.3 | 0.5 | mg/L | 02/06/99 | JB |
| PHOSPHORUS, | EPA 365.1 | BDL | 0.1 | mg/L | 02/18/99 | LG |
| TKN, | EPA 351.3 | 53.7 | 0.5 | mg/L | 02/06/99 | JB |

**Sample: 26A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| OIL & GREASE, | EPA 413.1 | BDL | 5 | mg/L | 02/04/99 | PT |

**Sample: 27A OUTFALL 00B** 02/03/99 **Collected: 02/03/99 Category: AQUEOUS**

| Test Description | | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| GROSS ALPHA, | IN WATER | BDL | 3 | pCi/L | 03/08/99 | SF |
| GROSS BETA, | IN WATER | BDL | 4 | pCi/L | 03/08/99 | SF |
| RADIUM, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |
| RADIUM-226, | IN WATER | BDL | 1 | pCi/L | 03/10/99 | SF |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

**Sample: 28A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| METHYLENE BLUE ACTIVE SUB. | BDL | 0.01 | mg/L | 02/17/99 | ML |
| SULFATE, EPA 375.4 | BDL | 10 | mg/L | 02/18/99 | JB |
| SULFITE, | BDL | 2 | mg/L | 02/17/99 | ML |

**Sample: 29A OUTFALL 00B 02/03/99 Collected: 02/03/99 Category: AQUEOUS**

| Test Description | Result | Detection Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| ASBESTOS WATER | ND | 0.2 | MF/L, >10um | 02/12/99 | EM |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 114 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 04A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 95 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 03/10/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020932
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL) PHTHALATE | BDL | 10 |

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 88 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 77 | 43 | - | 116 |
| p-TERPHENYL-d14 | 90 | 33 | - | 141 |
| PHENOL-d6 | 38 | 10 | - | 94 |
| 2-FLUOROPHENOL | 32 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 36 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022527
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

## TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 90 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 94 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020942
UNITS ug/L



11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03/99 Lab No: 15A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 105 | 35 - 114 |
| 2-FLUOROBIPHENYL | 120 Q | 43 - 116 |
| p-TERPHENYL-d14 | 125 | 33 - 141 |
| PHENOL-d6 | 40 | 10 - 94 |
| 2-FLUOROPHENOL | 53 | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 150 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST JAT
INSTRUMENT SATURN
FILE ID 0206505W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT


11 East Main Street Dayton, Ohio 45426 (937) 837-3744

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ACROLEIN | BDL | 20 |
| ACRYLONITRILE | BDL | 20 |
| 2-CHLOROETHYLVINYL ETHER | BDL | 20 |
| BENZENE | BDL | 2 |
| CARBON TETRACHLORIDE | BDL | 2 |
| CHLOROBENZENE | BDL | 2 |
| 1,2-DICHLOROETHANE | BDL | 2 |
| 1,1,1-TRICHLOROETHANE | BDL | 2 |
| 1,1-DICHLOROETHANE | BDL | 2 |
| 1,1,2-TRICHLOROETHANE | BDL | 2 |
| 1,1,2,2-TETRACHLOROETHANE | BDL | 2 |
| CHLOROETHANE | BDL | 10 |
| CHLOROFORM | BDL | 2 |
| 1,1-DICHLOROETHYLENE | BDL | 2 |
| 1,2-TRANS-DICHLOROETHYLENE | BDL | 2 |
| 1,2-DICHLOROPROPANE | BDL | 2 |
| CIS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| TRANS-1,3-DICHLOROPROPYLENE | BDL | 2 |
| ETHYLBENZENE | BDL | 2 |
| 1,2-DICHLOROBENZENE | BDL | 2 |
| 1,3-DICHLOROBENZENE | BDL | 2 |
| 1,4-DICHLOROBENZENE | BDL | 2 |
| METHYLENE CHLORIDE | BDL | 10 |
| CHLOROMETHANE | BDL | 10 |
| BROMOMETHANE | BDL | 2 |
| BROMOFORM | BDL | 2 |
| DICHLOROBROMOMETHANE | BDL | 2 |
| TRICHLOROFLUOROMETHANE | BDL | 2 |
| CHLORODIBROMOMETHANE | BDL | 2 |
| TETRACHLOROETHYLENE | BDL | 2 |
| TOLUENE | BDL | 2 |
| TRICHLOROETHENE | BDL | 2 |
| VINYL CHLORIDE | BDL | 10 |
| XYLENES | BDL | 10 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| D4-1,2 DICHLOROETHANE | 112 | 76 - 114 |
| D8-TOLUENE | 93 | 88 - 110 |

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 19A
Test Description: EPA 624 Method: 624 Test Code: 624_X
Collected: 02/03/99 Category: AQUEOUS

| | | | |
|---|---|---|---|
| 4-BROMOFLUOROBENZENE | 92 | 86 - | 115 |

Notes and Definitions for this Report:

DATE RUN 02/09/99
ANALYST JMM
INSTRUMENT GC/MS
FILE ID 9020933
UNITS ug/L
METHOD EPA 624
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| 2,4,6-TRICHLOROPHENOL | BDL | 10 |
| 4-CHLORO-3-METHYLPHENOL | BDL | 10 |
| 2-CHLOROPHENOL | BDL | 10 |
| 2,4-DICHLOROPHENOL | BDL | 10 |
| 2,4-DIMETHYLPHENOL | BDL | 10 |
| 2-NITROPHENOL | BDL | 10 |
| 4-NITROPHENOL | BDL | 50 |
| 2,4-DINITROPHENOL | BDL | 50 |
| 2-METHYL-4,6-DINITROPHENOL | BDL | 50 |
| PENTACHLOROPHENOL | BDL | 50 |
| PHENOL | BDL | 10 |
| ACENAPHTHENE | BDL | 10 |
| BENZIDENE | BDL | 50 |
| 1,2,4-TRICHLOROBENZENE | BDL | 10 |
| HEXACHLOROBENZENE | BDL | 10 |
| HEXACHLOROETHANE | BDL | 10 |
| BIS(2-CHLOROETHYL)ETHER | BDL | 10 |
| 2-CHLORONAPHTHALENE | BDL | 10 |
| 1,2-DICHLOROBENZENE | BDL | 10 |
| 1,3-DICHLOROBENZENE | BDL | 10 |
| 1,4-DICHLOROBENZENE | BDL | 10 |
| 3,3-DICHLOROBENZIDINE | BDL | 20 |
| 2,4-DINITROTOLUENE | BDL | 10 |
| 2,6-DINITROTOLUENE | BDL | 10 |
| FLUORANTHENE | BDL | 10 |
| 4-CHLOROPHENYL PHENYL ETHER | BDL | 10 |
| 4-BROMOPHENYL PHENYL ETHER | BDL | 10 |
| BIS(2-CHLOROISOPROPYL) ETHER | BDL | 10 |
| BIS(2-CHLOROETHOXY) METHANE | BDL | 10 |
| HEXACHLOROBUTADIENE | BDL | 10 |
| HEXACHLOROCYCLOPENTADIENE | BDL | 10 |
| ISOPHORONE | BDL | 10 |
| NAPHTHALENE | BDL | 10 |
| NITROBENZENE | BDL | 10 |
| N-NITROSODIMETHYLAMINE | BDL | 10 |
| N-NITROSODIPHENYLAMINE | BDL | 10 |
| N-NITROSODI-N-PROPYLAMINE | BDL | 10 |
| BIS(2-ETHYLHEXYL) PHTHALATE | BDL | 10 |

Belmonte Park Environmental Laboratories

Order # 99-02-232
03/16/99 09:23



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: EPA 625 SEMI VOLATILES Method: 625 Test Code: 625_AE
Collected: 02/03/99 Category: AQUEOUS

| | | |
|---|---|---|
| BUTYL BENZYLPHTHALATE | BDL | 10 |
| DI-N-BUTYL PHTHALATE | BDL | 10 |
| DI-N-OCTYL PHTHALATE | BDL | 10 |
| DIETHYL PHTHALATE | BDL | 10 |
| DIMETHYL PHTHALATE | BDL | 10 |
| BENZO(A)ANTHRACENE | BDL | 10 |
| BENZO(A)PYRENE | BDL | 10 |
| 3,4-BENZOFLUORANTHENE | BDL | 10 |
| BENZO(K)FLUORANTHENE | BDL | 10 |
| CHRYSENE | BDL | 10 |
| ACENAPHTHYLENE | BDL | 10 |
| ANTHRACENE | BDL | 10 |
| BENZO(GHI)PERYLENE | BDL | 50 |
| FLUORENE | BDL | 10 |
| PHENANTHRENE | BDL | 10 |
| DIBENZO(A,H)ANTHRACENE | BDL | 50 |
| INDENO(1,2,3-CD)PYRENE | BDL | 50 |
| PYRENE | BDL | 10 |
| ETHANOL AMINE | BDL | 100 |
| HYDRAZINE | BDL | 200 |

| SURROGATE | %RECOVERY | LIMITS | | |
|---|---|---|---|---|
| NITROBENZENE-d5 | 86 | 35 | - | 114 |
| 2-FLUOROBIPHENYL | 74 | 43 | - | 116 |
| p-TERPHENYL-d14 | 91 | 33 | - | 141 |
| PHENOL-d6 | 76 | 10 | - | 94 |
| 2-FLUOROPHENOL | 82 | 21 | - | 100 |
| 2,4,6-TRIBROMOPHENOL | 78 | 10 | - | 123 |

Notes and Definitions for this Report:

EXTRACTED 02/07/99
DATE RUN 02/26/99
ANALYST TC
INSTRUMENT GC/MS
FILE ID S9022605
UNITS ug/L
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| ALDRIN | BDL | 0.010 |
| ALPHA-BHC | BDL | 0.010 |
| BETA-BHC | BDL | 0.010 |
| DELTA-BHC | BDL | 0.010 |
| GAMMA-BHC | BDL | 0.010 |
| CHLORDANE | BDL | 0.010 |
| 4,4-DDT | BDL | 0.010 |
| 4,4-DDE | BDL | 0.010 |
| 4,4-DDD | BDL | 0.010 |
| DIELDRIN | BDL | 0.010 |
| ALPHA ENDOSULFAN | BDL | 0.010 |
| BETA ENDOSULFAN | BDL | 0.010 |
| ENDOSULFAN SULFATE | BDL | 0.10 |
| ENDRIN | BDL | 0.010 |
| ENDRIN ALDEHYDE | BDL | 0.020 |
| HEPTACHLOR | BDL | 0.030 |
| HEPTACHLOR EPOXIDE | BDL | 0.10 |
| PCB-1016 | BDL | 1 |
| PCB-1221 | BDL | 2 |
| PCB-1232 | BDL | 1 |
| PCB-1242 | BDL | 1 |
| PCB-1248 | BDL | 1 |
| PCB-1254 | BDL | 1 |
| PCB-1260 | BDL | 1 |
| TOXAPHENE | BDL | 0.20 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| DBC(SURROGATE, % RECOVERY) | 93 | 70 - 130 |
| 2,4,5,6-TCX(SURROGATE % REC.) | 95 | 70 - 130 |

Notes and Definitions for this Report:

EXTRACTED 02/06/99
DATE RUN 02/09/99
ANALYST JW
INSTRUMENT GC
FILE ID A020943
UNITS ug/L

Belmonte Park
Environmental
Laboratories



Order # 99-02-232
03/16/99 09:23

TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A
Test Description: PCB/PESTICIDES EPA 608 Method: 608 Test Code: 608
Collected: 02/03/99 Category: AQUEOUS

METHOD EPA 608
BDL BELOW DETECTION LIMIT

Belmonte Park
Environmental
Laboratories



TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 30A
Test Description: Triaryl Phosphate Sub-Out Method: Special Test Test Code: 8270_U
Collected: 02/03/99 Category: AQUEOUS

| PARAMETER | RESULT | LIMIT |
|---|---|---|
| TRIPHENYL PHOSPHATE ESTER | BDL | 5 |
| TRICRESYL PHOSPHATE ESTER | BDL | 5 |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| NITROBENZENE-D5 | 80 | 35 - 114 |
| 2-FLUOROBIPHENYL | 80 | 43 - 116 |
| p-TERPHENYL-d14 | 73 | 33 - 141 |
| PHENOL-d6 | 10 | 10 - 94 |
| 2-FLUOROPHENOL | 4 Q | 21 - 100 |
| 2,4,6-TRIBROMOPHENOL | 4 Q | 10 - 123 |

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN 02/11/99
ANALYST MN
INSTRUMENT SATURN
FILE ID 0206502W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT

| Facility name: | NPDES Permit number. | Outfall Number |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

## Addendum to NPDES Renewal Application Section III.B.10
## Toxic Pollutant Reasonable Potential Effluent Data

Sampling results indicate the presence of toxic pollutants in the Cook Nuclear Plant discharges as follows:

Strontium was detected in Outfall 00H (Turbine Room Sump). There are no plant processes that use strontium. Strontium is a trace element (21$^{st}$ among the elements in the earth's crust) usually associated with calcium and barium minerals in veins in limestone. The chief use of strontium is in fireworks, red signal flares, or on tracer bullets. Therefore, we do not believe that there is reasonable potential for strontium to be present in these discharges as a result of plant operations. We believe that strontium is present in the intake.

Copper was detected in Outfall 00H (Turbine Room Sump). Based on knowledge of the plant processes, there is reasonable potential for copper to be present in these discharges.

Michigan Department of Environmental Quality- Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

PLEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER | OUTFALL NUMBER |
|---|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 | 00H |

9. WATER TREATMENT ADDITIVES

Water treatment additives include any material that is added to water used at the facility or to a wastewater generated by the facility to condition or treat the water.

Approvals of water treatment additives are authorized by the DEQ under separate correspondence. The issuance of an NPDES permit does not constitute approval of the water treatment additives that are included in this application

A Are there water treatment additives in the discharge from this facility?

☐ No, proceed to item 4.

☒ Yes

B Have these water treatment additives been previously approved?

☐ No, continue with C below

☒ Yes. Submit a list of the previously approved water treatment additives and the date they were approved The information listed in C. 1-8 must be updated if it has changed since the previous approval.

C Submit a list of water treatment additives that are or may be discharged from the facility Applicants must submit the information listed below for each additive.

1. The water treatment additive Material Safety Data Sheet
2. The proposed water treatment additive discharge concentration
3. The discharge frequency (i e , number of hours per day, week, etc )
4. The outfall the water treatment additive is to be discharged from
5. The type of removal treatment, if any, that the water treatment additive receives prior to discharge.
6. The water treatment additive function (i e , microbiocide, flocculant, etc.)
7. A 48-hour LC50 or EC50 for a North American freshwater planktonic crustacean (either Ceriodaphnia sp , Daphnia sp , or Simocephalus sp )
8. The results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2)(a) of the Water Quality Standards. Examples of tests that would meet this requirement include a 96-hour LC50 for a rainbow trout, bluegill, or fathead minnow.

The required toxicity information (described in items 7 and 8 above) is currently available in the SWQD files for the water treatment additives listed on the DEQ's Internet page **http://www.deq.state.mi.us/swq/gleas/docs/wta/WTAlist.doc** If you intend to use one of the water treatment additives on this list, only the information in items 1 through 6 above needs to be submitted to the SWQD.

**Note:** The availability of toxicity information for a water treatment additive does not constitute approval to discharge the water treatment additive.

10. WHOLE EFFLUENT TOXICITY TESTS

Have any acute or chronic WET tests been conducted on any discharges or receiving water in relation to facility discharges within the last three years? If yes, identify the tests and summarize the results below unless the test has been submitted to the department in the last 5 years.

NO

Michigan Department of Environmental Quality-Surface Water Quality Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### B. Outfall Information

**PLEASE TYPE OR PRINT**

| FACILITY NAME | NPDES or COC PERMIT NUMBER | Outfall Number |
|---|---|---|
| **Donald C. Cook Nuclear Plant** | **MI0005827** | **00H** |

9 WATER TREATMENT ADDITIVES

| Water Treatment Additive | Approval Date |
|---|---|
| Hydrochloric Acid (pH control) | 11/14/96 change of process application, 11/25/96 approval. NPDES Permit application approval 9/28/00, 5/23/00 |
| Sulfuric Acid | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Sodium Hydroxide | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Sodium Bisulfite | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Citric Acid | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Phosphoric Acid | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Tide Detergent or equivalent | 11/14/96 change of process application, 11/25/96 approval NPDES Permit application approval 9/28/00, 5/23/00 |
| Aluminum sulfate | 7/20/94 |
| Ethanolamine solution, such as Betz Powerline 1440, Betz Powerline 1480, Nalco 92UM001 | 5/23/00 NPDES Permit approval 9/28/95 |
| Hydrazine Solution, such as· Betz Cortrol OS5035, (Formerly Betz Powerline 1205), Betz Cortrol OS5010, Nalco 19H | 5/23/00 NPDES Permit approval 9/28/95 |
| Carbohydrazide Solution such as· Nalco 1250 plus, Nalco Eliminox | 3/25/94 application, 4/15/94 approval, NPDES Permit approval 9/28/95 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# Section III.C

Michigan Department of Environmental Quality- Water Division

# WASTEWATER DISCHARGE PERMIT APPLICATION

## SECTION III - Industrial and Commercial Wastewater

### C. Signature Page

LEASE TYPE OR PRINT

| FACILITY NAME | NPDES PERMIT NUMBER |
|---|---|
| Donald C. Cook Nuclear Plant | MI0005827 |

1. CERTIFICATION

Rule 323 2114(1-4) promulgated under the Michigan Act, requires that this application be signed as follows:

A. For a corporation, by a principal executive officer of at least the level of vice president, or their designated representative if the representative is responsible for the overall operation of the facility from which the discharge described in the permit application or other NPDES form originates.
B. For a partnership, by a general partner.
C. For a sole proprietorship, by the proprietor.
D. For a municipal, state, or other public facility, by either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.

**Note:** If the signatory is not listed above, but is authorized to sign the application, please provide documentation of that authorization.

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for having knowledge of violations."*

Print Name: J. E. Pollock Title: Site Vice President

Representing: Indiana Michigan Power

Signature: J E Pollock Date: 3/25/03

**This completes Section III. Return the completed application (Sections I, III and any attachments) to the appropriate district office. See pages 2 and 3 of the appendix for district office addresses and a map of district boundaries.**

**If assistance is needed completing this application, contact the Permits Section, telephone number: 517-373-8088.**