# Section III.B Outfall 00A

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## Michigan Department of Environmental Quality- Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B Outfall Information

t	nplete he apr	e a separate Section III.B ( plication for additional outfa	Outfall Information (pa alls as necessary.	ges 26-31) fo	r each outfall	l at the facility. Mak	e copies of thi	s blank section
			-			-		
		NAME Donald C Cook Nucl	ear Plant		DES PERMIT I 0005827	NUMBER	OUTF. 00A	ALL NUMBER
1.	OUTF	FALL INFORMATION (see page		pletion of this p	bage)			
	A [	Watershed Lower St Joseph						,
	в	Receiving Water						
	с	Lake Michigan County			Township Lake			
		/ <del>-</del> , / <del>-</del>	Y4	Section	Lake	Town	Range 19W	
	D.	SW I	NW	06	Longitude	065	1977	
	E.	41 58' 30"			86 34' 30"			
	F.	Type of Wastewater Discharge	d (Check all that apply to	this outfall)	_			(a to a substad)
		Contact Cooling	Sanıtary Wastev			dwater Cleanup		/ater (regulated) /ater (not regulated)
		Noncontact Cooling	Process Wastew			tatic Pressure Test		aler (not regulater)
		Storm water subject to efflu						
		Other - specify (see *Table	e 8 - Other Common Types	of Wastewate	r in appendix)			
l	J.	What is the maximum Facility	Design Flow Rate: <u>1</u> M	GD				
1	G.	What is the maximum discharg	ge flow authorized for this	outfall Seas	ional Discharge	ers	MGY Contir	nue with Item H.
				Cont	inuous Dischar	rgers <u>1</u>	MGD Contu	nue with Item I.
	н	Seasonal Discharge						
		List the discharge periods (by	month) and the volume dis	scharged in the	space provide			A smull Tetal
		From	Through			Discharge Volume		Annual Total
		From	Through			Discharge Volume		
		From	Through			Discharge Volume		
		From	Through			Discharge Volume		
			I					
	1	Continuous Discharge How often is there a discharg	e from this outfall (on the a	verage)?	24 Hours/D	ay <u>365</u> Days/Ye	ar	
		Batch dischargers must pro	ovide the following addition	ional informat	ion:			
		Is there effluent flow equaliza	tion?	🗋 No				
		Batch Peak Flow Rate	-	Number	of batches disc	charged per day		
			Minimu	ח		Average	Ma	aximum
		Batch Volume (gallons				· –		
		Batch Duration (minute	es)				L	

## Michigan Department of Environmental Quality- Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION

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SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

	ASE TYPE OR PRINT		
	JILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
	Donald C. Cook Nuclear Plant	MI0005827	00A
2.	PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARG This information is used to determine the applicable federal regulat the type of facility. Page 7 of the appendix contains an abbreviate application. For assistance call the Permits Section. All industries process. If the wastestream is not regulated under federal categori potential to be present in the discharge. To submit additional inform	ions for this discharge. The information req ed list of various industries and the types of shall provide the name of each process an cal standards, the applicant shall report all p	Information each shall report in this d the SIC or the NAICS code for the
	PROCESS INFORMATION A Name of the process contributing to the discharge: <u>Steam Gene</u>	erator Blowdown	
	B. SIC or NAICS code. 4911		
	C Describe the process and provide measures of production (see Generator Blowdown. 1 MGD maximum flow 2247 MWE total p	the instructions to determine the appropriate lant electrical generation.	information to be reported) Steam
	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:		1
	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 t	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 t	he 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

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

In accordance with 40 CFR 122.21, all applicants must report CBOD<sub>5</sub>, 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 81/2" 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:  $\mu g/l = micrograms$  per liter, mg/l = milligrams per liter,  $^{\circ}F = degrees$  Fahrenheit,  $^{\circ}C = degrees$  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<sub>5</sub>, 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 in and in 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<sub>5</sub>, 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.

NPDES Permit MI0005827

REPLY TO

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

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.ml.us RUSSELL J. HARDING, Director

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 Bndgman, MI 49106 616 465 5901

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

Page Two Mr. Morley January 25, 1999

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.

**X** 

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

Donald C. Cook Nuclear Plant MI0005827 00A	í	CILITY NAME		NPDES PERMIT NUMBER OUTFALL NUMBER	_
	L		Donald C. Cook Nuclear Plant		$\forall$

#### 4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION

Existing primary industries that discharge process wastewater must submit the results of at least one effluent analysis for <u>selected</u> organic pollutants identified in Table 2 (as determined from Table 1, <u>Testing Requirements for Organic Toxic Pollutants by Industrial Category</u>), 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

EASE TYPE OR PRINT

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.

#### A 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

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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 - OOB (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		Sample Number	De	Sample scription	
	01	OUTFALL		02/03/99	16	OUTFALL	00B	02/03/99
	01	OUTFALL		02/03/99	17	OUTFALL	00B	02/03/99
	02	OUTFALL		02/03/99	18	OUTFALL	00B	02/03/99
)	03	OUTFALL		02/03/99	19	OUTFALL	00B	02/03/99
	04	OUTFALL		02/03/99	20	OUTFALL	00B	02/03/99
	06	OUTFALL		02/03/99	21	OUTFALL	00B	02/03/99
	07	OUTFALL		02/03/99	22	OUTFALL	00B	02/03/99
	08	OUTFALL		02/03/99	23	OUTFALL	00B	02/03/99
	09	OUTFALL		02/03/99	24	OUTFALL	00B	02/03/99
	10	OUTFALL		02/03/99	25	OUTFALL	00B	02/03/99
	10	OUTFALL		02/03/99	26	OUTFALL	00B	02/03/99
	12	OUTFALL		02/03/99	27	OUTFALL	00B	02/03/99
	13 .	OUTFALL		02/03/99	28	OUTFALL	00B	02/03/99
	14	OUTFALL		02/03/99	29	OUTFALL	00B	02/03/99
	15	OUTFALL		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".

Certified By MATT LAKE

Committed to Quality Since 1958 Dayton, Ohio 45426

(937) 837-3744



Belmonte Park ronmental oratories

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

#### TEST RESULTS BY SAMPLE

Page 3

			Detection			
m Descripti	07	Result	Limit	<u>Units</u>	<u>Analyzed</u>	By
Test Descripti	EPA 200.7	8	1	mg/L	02/15/99	RJE
MAGNESIUM,		0.01	0.01	mg/L	02/13/99	RJE
MANGANESE,	EPA 200.7		0.0002	mg/L	02/15/99	RJE
MERCURY,	EPA 245.1	BDL	0.0002		02,20,00	EP
METALS DIGESTI	ON, WATER	-			02/13/99	RJE
MOLYBDENUM,	EPA 200.7	BDL	0.01	mg/L	•	
NICKEL,	EPA 249.2	. BDP	0.005	mg/L	03/08/99	RJE
	EPA 200.7	BDL	0.1	mg/L	02/13/99	RJE
SELENIUM,	EPA 272.2	BDL	0.0005	mg/L	03/08/99	RJE
SILVER,		0.08	0.01	mg/L	02/15/99	RJE
STRONTIUM,	EPA 200.7		0.001	mg/L	03/08/99	RJE
THALLIUM,	EPA 279.2	BDL		mg/L	02/15/99	RJE
URANIUM	EPA 200.7	. BDL	0.1	- · ·	02/13/99	RJE
ZINC,	EPA 200.7	BDL	0.02	mg/L	02/13/99	KUE
Sample: 07A	OUTFALL 00H	02/03/99 Coli	lected: 02/03/9	9 Category:	AQUEOUS	

Sample: 08A OUTFALL 00H

			Detection			
Test Description		Result	Limit		<u>Analyzed</u>	
Test Description				ma/L	03/05/99	$\mathbf{LG}$
SULFIDE,	EPA 376.1	BDL	-			
TOTAL CYANIDE,	EPA 335.2	BDL	0.01	шд\г	03/04/99	51

02/03/99 Collected: 02/03/99 Category: AQUEOUS

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			Detection			
mark Deceminti	~~	<u>Result</u>	Limit	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Test Description	EPA 420.1	0.03	0.01	mg/L	02/23/99	JB
PHENOLICO,		•				

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

		Detection	1		_
<u>Test Description</u> CHLORINE, RESIDUAL TOTAL	<u>Result</u> BDL	<u>Limit</u> 0.05		 <u>Analyzed</u> 02/04/99	

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

			<u>Detection</u>			
		Result	Limit	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
<u>Test Description</u>		0.36	0.2	mg/L	02/05/99	LG
NITRATE-NITRIT		BDL	0.5	mg/L	02/11/99	JB
ORGANIC NITROG		-	0.1		02/18/99	
PHOSPHORUS,	EPA 365.1	BDL			02/06/99	
TKN,	EPA 351.3	0.52	0.5	1197 H		

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

#### TEST RESULTS BY SAMPLE

Page 8

Sample Description:	OUTFALL 00H	02/03/99	Lab No:	04A
Test Description:	EPA 624		Method:	624
Collected:	02/03/99	Ca	ategory:	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 %R	ECOVERY	LIMITS
D4-1,2 DICHLOROETHANE	114	<u> </u>
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Committed to Quality Since 1958

D8-TOLUENE

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#### TEST RESULTS BY SAMPLE

Page 9

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

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02/03/99 Lab No: 04A Method: 624 Category: AQUEOUS

Test Code: 624\_X

4-BROMOFLUOROBENZENE

95

86 - 115

Notes and Definitions for this Report:

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

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PARAMETER

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

#### TEST RESULTS BY SAMPLE

RESULT

LIMIT

Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A Test Description: EPA 625 SEMI VOLATILES Method: 625 Collected: 02/03/99 Category: AQUEOUS Page 10

Test Code: 625\_AE

PARAMETER	RESOUL	
2,4,6-TRICHLOROPHENOL	BDL	10
4-CHLORO-3-METHYLPHENOL	BDL	10
2-CHLOROPHENOL	BDL	
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	<u>    10</u>
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	<u> </u>
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

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#### TEST RESULTS BY SAMPLE

02/03/99 Lab No: 05A

Page 11

Test Code: 625\_AE

Sample Description: OUTFALL 00H Test Description: EPA 625 SEMI VOLATILES Method: 625 Collected

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FION · RPA 625 SEMI VULAIIUBU		
cted: 02/03/99	Category: AQUEOUS	
BUTYL BENZYLPHTHALATE DI-N-BUTYL PHTHALATE DI-N-OCTYL PHTHALATE DIETHYL PHTHALATE DIMETHYL PHTHALATE BENZO (A) ANTHRACENE BENZO (A) PYRENE 3,4-BENZOFLUORANTHENE BENZO (K) FLUORANTHENE CHRYSENE ACENAPHTHYLENE ANTHRACENE BENZO (GHI) PERYLENE FLUORENE PHENANTHRENE	Category: AQUEOUS         BDL       10         BDL       10	
DIBENZO (A, H) ANTHRACENE INDENO (1,2,3-CD) PYRENE	BDL 5	0
PYRENE	BDL1 BDL1	0
ETHANOL AMINE HYDRAZINE	BDL20	_

SURROGATE	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	88	35 -	<u>    114</u>
2-FLUOROBIPHENYL	77	43 -	116
p-TERPHENYL-d14	90	33 -	141
P-TERPHENID-014 PHENOL-d6	38	10 -	94
2-FLUOROPHENOL	32		100
2,4,6-TRIBROMOPHENOL	36	<u>    10</u> -	123

Notes and Definitions for this Report:

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

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# Order # 99-02-232 Page 03/16/99 09:23 TEST\_RESULTS\_BY\_SAMPLE Sample Description: OUTFALL 00H 02/03/99 Lab No: 05A

Page 12

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

PARAMETER	RESULT	LIMIT
		0.010
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	<u> </u>
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	<b>%RECOVERY</b>	LIMITS
DBC (SURROGATE, % RECOVERY)	90	<u>    70</u> - <u>   130</u>
2,4,5,6-TCX(SURROGATE % REC.)	94	<u> </u>

Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 ANALYST \_JW INSTRUMENT \_ GC FILE ID A020942 UNITS \_uq/L

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(937) 837-3744



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#### TEST RESULTS BY SAMPLE

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

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Method: 608 Category: AQUEOUS Test Code: 608

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METHOD EPA 608 BDL BELOW DETECTION LIMIT

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

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#### 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 TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL		5 5
SURROGATE	%RECOVI	ERY	LIMITS	
NITROBENZENE-D5	105	<u> </u>	<u>35</u> -	114
2-FLUOROBIPHENYL	120 (	2	43 -	116
p-TERPHENYL-d14	125	5	<u> </u>	<u>    141</u>
- PHENOL-d6	4(	<u> </u>	<u> 10</u> -	94
2-FLUOROPHENOL	5;	<u> </u>	<u>21</u> -	100
2,4,6-TRIBROMOPHENOL	150 (	2	<u> 10</u> -	<u>    123</u>

Notes and Definitions for this Report:

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EXTRACTED 02/08/99 DATE RUN 02/11/99 ANALYST JAT INSTRUMENT <u>SATURN</u> FILE ID <u>0206505W</u> UNITS <u>ug/L</u> METHOD <u>8270</u> BDL <u>BELOW DETECTION LIMIT</u> Page 14

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#### TEST RESULTS BY SAMPLE

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Order	#	99	- 0	2-	232
03/16,	/99	0	9:	23	

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Sample Description: OUTFALL 00B

Collected: 02/03/99

Test Description: EPA 624

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-DICHLOROPROPYLEN	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	
BROMOFORM	BDL	2
DICHLOROBROMOMETHANE	BDL	2
TRICHLOROFLUOROMETHANE	BDL	2
CHLORODIBROMOMETHANE	BDL	2
TETRACHLOROETHYLENE	BDL	
TOLUENE	BDL	
TRICHLOROETHENE	BDL	2
VINYL CHLORIDE	BDL	10
XYLENES	BDL	10
CTTT DO A TE	*RECOVERY	LIMITS
SURROGATE	112	76

SURROGATE	<b>%RECOVERY</b>	LIMIT	S	
	112	76	-	114
D4-1,2 DICHLOROETHANE		88	-	110
D8-TOLUENE	93	00		

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#### TEST RESULTS BY SAMPLE

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

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

Test Code: 624\_X

4-BROMOFLUOROBENZENE

86 - 115

Notes and Definitions for this Report:

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

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#### TEST RESULTS BY SAMPLE

Sample Description:OUTFALL 00B02/03/99Lab No: 20ATest Description:EPA 625SEMI VOLATILESMethod: 625Collected:02/03/99Category: AQUEOUS

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Test Code: 625\_AE

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-DICHLOROFILIOL 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
	BDL	50
PENTACHLOROPHENOL	BDL	10
PHENOL	BDL	10
ACENAPHTHENE	BDL	50
BENZIDENE	BDL	10
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	20
3, 3-DICHLOROBENZIDINE	BDL	10
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	
HEXACHLOROCYCLOPENTADIENE	BDL	
ISOPHORONE	BDL	
NAPHTHALENE	BDL	
NITROBENZENE	BDL	
N-NITROSODIMETHYLAMINE	BDL	
N-NITROSODIPHENYLAMINE	BDL	
N-NITROSODI-N-PROPYLAMINE	BDL	
BIS (2-ETHYLHEXYL) PHTHALATE	<u></u> <u></u>	

Committed to Quality Since 1958

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Order #	\$ 99-02-232	
03/16/9	99 09:23	

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#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Test Description: EPA 625 SEMI VOLATILES Collected: 02/03/99 C	Lab No: 20 Method: 62 ategory: AQ	5
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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	86	<u> </u>	114
2-FLUOROBIPHENYL	74	43 -	116
p-TERPHENYL-d14	<u> </u>	<u> </u>	141
PHENOL-d6	76	<u>    10</u> -	94
2-FLUOROPHENOL	82		100
2,4,6-TRIBROMOPHENOL	78	<u>    10</u> -	123

Notes and Definitions for this Report:

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

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Test Code: 625\_AE

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#### TEST RESULTS BY SAMPLE

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

Test Code: 608

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

	SURROGATE	<b>%RECOVERY</b>	LIMITS	
DBC (SURROGATE,		93	<u> </u>	130
2,4,5,6-TCX (SURROG		95	<u> </u>	

Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 ANALYST \_JW INSTRUMENT \_\_\_\_\_GC FILE ID <u>A020943</u> UNITS \_\_Uq/L

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#### 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

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Test Code: 608

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METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

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#### 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 TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL		5
SURROGATE NITROBENZENE-D5 2-FLUOROBIPHENYL p-TERPHENYL-d14 PHENOL-d6 2-FLUOROPHENOL 2,4,6-TRIBROMOPHENOL	*RECOV		LIMITS <u>35</u> - <u>43</u> - <u>33</u> - <u>10</u> - <u>21</u> - <u>10</u> -	<u>114</u> <u>116</u> <u>141</u> <u>94</u> <u>100</u> <u>123</u>

Notes and Definitions for this Report:

EXTRACTED 02/08/99 DATE RUN 02/11/99 ANALYST \_MN INSTRUMENT <u>SATURN</u> FILE ID \_\_\_\_\_0206502W UNITS \_ug/L METHOD \_\_\_\_\_8270 BDL \_\_\_\_\_BELOW DETECTION LIMIT

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## Additional Sample Data (Cook Nuclear Lab)

#### 00A aluminum

Date	Al (ug/l)	Date	Al (ug/l)	
2/3/99	+ <u> </u>	5/4/02	51	
5/2/02		5/4/02	5 02	
5/2/02		5/4/02	4.12	-
5/2/02		5/4/02	2 56	
5/2/02		5/4/02	5 26	-
5/3/02	5 27	5/4/02	4 92	-
5/3/02	48	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	67	
5/3/02	5 71	5/4/02	6 05	
5/4/02	4 38	5/4/02	7.81	
5/4/02	52	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		220	
5/4/02		Max monthly	220 00	
5/4/02		Count	57	
5/4/02		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	39			 
5/4/02 5/4/02	4 26 1 84			 -
5/4/02	1 84			 -
5/4/02	2 95 4 78			 -
5/4/02	3 52			 -
5/4/02	2.77			 -
5/4/02	3 96			 -
5/4/02	5 30			 
				 -
				-
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#### Section III B. 6 and 7

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	
Count	14
Method	200.7

#### Additional sample data (Cook Nuclear Lab)

00A Manganese uGL

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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

#### Section III.B.6

Non-routine sample data
(Cook Nuclear Lab)

## 00A Hydrazine ugl

Date	1	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	
Mo	nthly Max	
	Count	
		M D 1385
	3 ug/l	
DL:	10 ug/l	

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	Section III.B.6					tine samp Nuclear				00 <i>4</i>	A 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	73	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	92	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	64	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	63	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	28	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	62	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	88	1/21/01	34	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	52	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	58	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	116
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	59	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	36	3/11/01	9 88
1/12/01	7.96	1/24/01	9 18	2/4/01	59	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	59	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	73	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	<b>~/18/01</b>	5.9	3/2/01	4.82	3/13/01	4.737

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## Non-routine sample data (Cook Nuclear Lab)

#### 00A Ethanolamine Method 300.0

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Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	Date	Ethan	olamine	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	66	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	64	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	58	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	1
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 <sub>(</sub>	
3/19/01	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	- 1	2.52	
	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 3/20/01	5.456	4/1/01	2.918	4/12/01	66	4/23/01	2 43	5/5/01	5 611	5/18/01		3.69	۰.
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	, ,
	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	<u></u>
3/21/01 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	1
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	•	541	÷ .
3/21/01	5 23	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	1 -
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	,
	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,	2.
3/23/01	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	ų.	5 46	
3/24/01		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	
3/24/01	5.93 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		54	,
3/25/01		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	5.52	4/5/01	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	5.5	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	
3/25/01	5 33		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	5 57	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	
3/26/01	68	4/6/01	1.04	-, 10/01	0.00								

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	12	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	64	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	64	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	48	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	32	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	59	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	59	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	58	8/5/01	39	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	49	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	28	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	278	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 4 11	6/26/01	4.82	8/7/01	5 38	8/20/01	3 34	8/31/01	130	1/9/02	936	
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 6/11/01	4 12	6/28/01 6/29/01	4 59 4 4	8/8/01	5.54	8/20/01	3 36	9/1/01	97.3	1/16/02	13	
6/11/01	4.07	6/30/01		8/8/01	5.53	8/21/01	3 59	9/5/01	96.5	1/16/02	14	
6/12/01	4.97	7/1/01	4 23 2.75	8/8/01 8/10/01	5 48 7.24	8/21/01 8/21/01	3.58	9/5/01	105.8	1/16/02	12.5	
6/12/01	4.91	7/2/01	2.73	8/10/01	7.15	8/21/01	3.57 3.49	9/5/01 9/5/01	128.5	1/16/02	12.5	
6/12/01	4.92	7/3/01	84	8/10/01	7.19	8/22/01			48.2	1/23/02	14.7	
6/12/01	4.88	7/4/01	5 08	8/10/01	7.18	8/22/01 8/22/01	3.28 3.21	9/9/01 9/10/01	136 99.4	1/23/02 1/23/02	15.2	
6/13/01	5.3	7/5/01	2 96	8/11/01	9 03	8/22/01	3.21	9/10/01 9/10/01	99.4 121.7	1/23/02	15.7 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	1/23/02	- 18.5	
			0.10				0.10	5/10/01	70.0	1/30/02	- 10 <b>.</b> 0	

#### Section III.B 6

## Non-routine sample data (Cook Nuclear Lab)

00A	Ethanol	amine
	Method	300.0

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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	116
3/27/02	13 28	5/23/02	< 0 500	8/7/02	11 4	10/30/02	12 11 8
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	12.79
4/3/02	11.5	5/30/02	17.7	8/21/02	11 84	11/6/02 11/6/02	13.06
4/3/02	11.1	5/30/02	18 8	8/21/02	11.26	11/6/02	13.00
4/3/02	11	5/30/02	14.7	8/21/02	11.86	Max	136
4/3/02	116	5/30/02	29 9	8/21/02	11.43		
4/10/02	9.03	5/30/02	15 5	8/28/02	11.51	Monthly Avg	972
4/10/02	8.68	6/4/02	27.5	8/28/02	11.42	Count	912
4/10/02	8 92	6/5/02	31.2	8/28/02	11.36		

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## 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

FAC	ILIT	YNAME	NPDES PERMIT NUMBER	OUTFALL NUMBER						
		Donald C Cook Nuclear Plant	MI0005827	00A						
9	Wa	TER TREATMENT ADDITIVES ter treatment additives include any material that is added to water us t the water.	ed at the facility or to a wastewater generated by	the facility to condition or						
		provals of water treatment additives are authorized by the DEQ under stitute approval of the water treatment additives that are included in the		NPDES permit does not						
	A	Are there water treatment additives in the discharge from this facility?								
		No, proceed to item 4								
	$\boxtimes$	Yes								
	B. I	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 addite	ve receives prior to discharge.	Т						
	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 requirement of Rule 323.1057(2)(a) of the Water Quality Standards a rainbow trout, bluegill, or fathead minnow.								
	oni	required toxicity information (described in items 7 and 8 above) is c the DEQ's Internet page http://www.deq state mi.us/swq/gleas/de tives on this list, only the information in items 1 through 6 above need	ocs/wta/WTAlist.doc If you intend to use one							
	Not	e: The availability of toxicity information for a water treatment additive	does not constitute approval to discharge the wate	er treatment additive.						
10.	W۲	IOLE EFFLUENT TOXICITY TESTS								
		e any acute or chronic WET tests been conducted on any discharges is, identify the tests and summarize the results below unless the test t								

## Michigan Department of Environmental Quality-Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION SECTION III - Industrial and Commercial Wastewater B. Outfall Information

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PLEASE TYPE OR PRINT

FACILITY NAME	NPDES or COC PERMIT NUMBER M10005827	Outfall Number 00A				
Donald C. Cook Nuclear Plant						
9 WATER TREATMENT ADDITIVES						
Water Treatment Additive	Water Treatment Additive Approval Date					
Ethanolamine solution, such as Betz Powerline 1440, Betz Powerline 1480, Naico 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, NPL	DES Permit approval 9/28/95				
	<u>.  </u>					
		<u>, , , , , , , , , , , , , , , , , , , </u>				

# 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 ut he application for additional outfalls as necessary.

PLEASE	TYPE OR PRINT	· · · · ·		· · ·		-				
FACILITY				DES PERMIT I 0005827	NUMBER	001F	ALL NUMBER			
	Donald C. Cook N	uclear Plant								
1. OUT	FALL INFORMATION (see p	age 25 for instruction on con	npletion of this	page)						
	Watershed									
A	Lower St Joseph									
В.	Receiving Water									
	Lake Michigan			Township	P					
C.										
	1/4, 1/4	1/4	Section	4	Town	Range				
D.	SW	NW	06		06S	19W				
E	Latitude			Longitude						
-	41 58' 30"			86 34' 30"						
F.	Type of Wastewater Dischar	rged (Check all that apply to	this outfall)							
				C Ground	lwater Cleanup	Storm W	/ater (regulated)			
	Contact Cooling	Sanıtary Waster		_						
	Noncontact Cooling	Process Waster	vater	Hydros	tatic Pressure Test		/ater (not regulated)			
	Storm water subject to e	fluent guidelines (indicate u	inder which cat	egory)	_					
	Other - specify (see "Ta	ble 8 - Other Common Type:	s of Wastewate	r" in appendix)	<b></b>					
J.	What is the maximum Facili	ty Design Flow Rate <u>1</u> N	IGD							
						MCV Contin	ue with Item H			
G	What is the maximum disch	arge flow authonzed for this	outfall Seas	ional Discharge	ers	•				
			Cont	inuous Dischar	gers <u>1</u>	MGD Contir	nue with Item I.			
н	Seasonal Discharge									
	=	by month) and the volume du	scharged in the	space provide	d below.					
					Discharge Volume		Annual Total			
	From	Through			Discharge volume					
	From	Through			Discharge Volume					
	From	Through			Discharge Volume					
	<b>F</b>	Through			Discharge Volume					
	From	Though		-	2.com.go					
1.	Continuous Discharge	irge from this outfall (on the a	werane)?	24 Hours/Da	ay <u>365</u> Days/Year	r				
				—	-, <u></u> ,					
	Batch dischargers must p									
ł	Is there effluent flow equal:	zation?	🔲 No							
	Batch Peak Flow Rate		Number (	of batches discl	harged per day:	-				
		Minimur	n		Average	Ma	ximum			
ļ	Batch Volume (gallo		. <u> </u>							
}	Batch Duration (min									
1					l_	<b></b>				

# 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		
•	CILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
	Donald C. Cook Nuclear Plant	MI0005827	
2.	PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE This information is used to determine the applicable federal regulations the type of facility. Page 7 of the appendix contains an abbreviated lis application. For assistance call the Permits Section. All industries sha process. If the wastestream is not regulated under federal categorical s potential to be present in the discharge. To submit additional information	st of various industries and the types of information Il provide the name of each process and the SIC of standards, the applicant shall report all pollutants w	n each shall report in this
	PROCESS INFORMATION A. Name of the process contributing to the discharge: <u>Steam Generate</u>	or Blowdown	
	B. SIC or NAICS code. 4911		
	C. Describe the process and provide measures of production (see the r Generator Blowdown. 1 MGD maximum flow 2247 MWE tota plant of	nstructions to determine the appropnate informatio electrical generation	n to be reported): Steam
	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 i	nstructions to determine the appropriate informatio	n to be reported):
	PROCESS INFORMATION A. Name of the process contributing to the discharge'	· · · · · · · · · · · · · · · · · · ·	
	B. SIC or NAICS code:		I
	C Describe the process and provide measures of production (see the in	nstructions to determine the appropriate information	n 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 in	nstructions 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 in	nstructions 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

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

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In accordance with 40 CFR 122.21, all applicants must report CBOD<sub>5</sub>, 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 81/2" 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:  $\mu g/l = micrograms$  per liter, mg/l = milligrams per liter,  $^{\circ}F =$  degrees Fahrenheit,  $^{\circ}C =$  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<sub>5</sub>, 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 in 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<sub>5</sub>, 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 charactenstics of contaminated groundwater.

## NPDES Permit MI0005827

STATE OF MICHIGAN



JOHN ENGLER, Governor DEPARTMENT OF ENVIRONMENTAL QUALITY "Better Service for a Better Environment" PLAINWELL DISTRICT OFFICE 1342 SR 69 W STE B PLAINWELL MI 49080-1915 HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

REPLY TO:

INTERNET. www.deq.state.mi.us RUSSELL J. HARDING, Director

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 Brdgman, MI 49106 616 465 5901

> 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

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

Page Two Mr. Morley January 25, 1999

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. . . ..

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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

	ASE TYPE OR PRINT					
1	CILITY NAME Donald C Cook Nuclear Plant		NPDES PERMIT NU MI0005827	JMBER	00TFAL	
ŀ	3. WASTEWATER CHARACTERISTICS - CONVENTION	AL POLLUTANTS	- Instructions for cor	npleting this page ar	e on the facing pag	e
	Check this box if additional information is included a					
		Maximum Daily Concentration	Maximum Monthly Concentration	Units	Number of Analyses	Sample Type
	Biochemical Oxygen Demand - five day (BOD <sub>5</sub> )	82	82	mg/l	2	Grab 24 Hr Comp
	COD (Chemical oxygen demand)	331	331	mg/l	2	Grab
	TOC (Total organic carbon)	19 9	19 9	mg/l	2	Grab
	Ammonia Nitrogen (as N)	43 4	43 4	mg/l	2	Grab
	Total Suspended Solids	1	<4	mg/l	124	Grab
	Total Dissolved Solids	NA	NA	mg/i	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
-1	Dissolved Oxygen	mınimum daıly 0	Do Not Use	mg/l	17	Grab
	pH (report maximum and minimum of individual samples)	mınimum 9.75	maximum 10.28	standard units	34	Grab
	Temperature, Summer	* NA	NA	□℉□℃	NA	Grab
	Temperature, Winter	* NA	NA	□°F □°C	NA	Grab
	Oil & Grease	<5	<5	mg/l	11	Grab
	Hydrazine	271	140	mg/l	53	Grab
	Ethanolamine	149	66	mg/l	1122	Grab
						Grab 24 Hr Comp
						Grab
	See Attached for additional Data					Grab 24 Hr Comp
	* NA - Internal Outfall					Grab 24 Hr Comp
						Grab
						Grab
~						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

JILITY NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
Donald C. Cook Nuclear Plant	M10005827	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 <u>selected</u> organic pollutants identified in Table 2 (as determined from Table 1, <u>Testing Requirements for Organic Toxic Pollutants by Industrial Category</u>), 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-trichlorophenoy) 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 En<sup>\</sup> imental Quality- Water Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR P	RINT														
FACILITY NAME						PDES PERMI	T NUMBER			OUTFALL N	UMBER				
Donald C Cook Nucle	ear Plant				MI	0005827			[ (	00B	r	1 for a star	. Sur f		1.3 4
SAMPL	E 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					
PARAMETER	No.	Conc. (ug/l)	د Conc. (ug/l)	Conc. Cug/l)	Conc. (ug/l)	Conc.	Conc. (ug/l)	∜ Conc.∷ (ug/l) _	Conc. / (ug/l)	Conc. (ug/l)	Conc. (ug/l)	Sample Type	' Analytic.	L. Call	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												<u> </u>			
for additional															
data.						<u> </u>									
		1										<u> </u>	L 		
		,	-												
	-														
	-						4	-							
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						-				-	1			-	
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## Additional Sample Data Summary Sheet

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## For Outfall 00B

			Sample		Analytical	Max	# of
Parameter	2/3/99	3/25/02	type		Method	monthly	Analyses
Table 2 Martin Contact And And	a faith a philip and a stand	12 MAR WAR CARES	れ、ごうれた。	W. I. Margarets	Acres Birly PA	4. 7 . 7 . 30 4	行动来一个名户段
See Attached data set from Bo							
Table 3-1272 CEC. SY MENTE	Charge States St.	了合新的中国工作	Stat Alasta	يا وا يوسليد من أوسين في و و دوم يوسليد من المناسي و	TINE A PART	和小时初	3'Y 1 1 1 1 1 1 1 1
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	2792	<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 States States and States	「日子」「「「「「」」	行為史。公長都認	国际中国	area see	A States	a the shafe	All Strates
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 Belmon	te Park Laboratories I	s attached					
See Attached Data set from C	ook Nuclear Plant Lab	oratory					
Table 5	2时"网络小学校》 "是	林市 网络小小小	57 m (**	not the	Litter fish, fr	27.8 44.05.3	A. 91 . 8 . 8 . 6
See Attached data set from Be							
See Attached Data set from C	ook Nuclear Plant Lat	oratory					

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

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Attn: BLAIR ZORDELL

Purchase Order: 4307976 Invoice Number: Order #: 99-02-232 Date: 03/16/99 09:23 Work ID: OUTFALL 00H - OOB Date Received: 02/03/99 Date Completed: 03/16/99

(FAX)

Client Code: AEP\_4

ND= NONE DETECTED OHIO CERT.# 12345

## SAMPLE IDENTIFICATION

			Comple		Sample		Sample	
	Sample		Sample		Number	De	scription	
	Number		scription		16	OUTFALL	00B	02/03/99
	01	OUTFALL		02/03/99	17	OUTFALL		02/03/99
	02	OUTFALL	00H	02/03/99	18	OUTFALL		02/03/99
	03	OUTFALL	00H	02/03/99		OUTFALL		02/03/99
,	04	OUTFALL	00H	02/03/99	19	OUTFALL		02/03/99
	05	OUTFALL	00H	02/03/99	20			02/03/99
	06	OUTFALL		02/03/99	21	OUTFALL		02/03/99
	07	OUTFALL		02/03/99	22	OUTFALL		02/03/99
	08	OUTFALL		02/03/99	23	OUTFALL		•
		OUTFALL		02/03/99	24	OUTFALL		02/03/99
	09			02/03/99	25	OUTFALL		02/03/99
	10	OUTFALL		02/03/99	26	OUTFALL	00B	02/03/99
	11	OUTFALL		02/03/99	27	OUTFALL	00B	02/03/99
	12	OUTFALL			28	OUTFALL	00B	02/03/99
	13 ·	OUTFALL		02/03/99	29	OUTFALL		02/03/99
	14	OUTFALL	00H	02/03/99	30	OUTFALL		02/03/99
	15	OUTFALL	OOH	02/03/99	50	001112		

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".

Certified By MATT LAKE

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(937) 837-3744



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		6							
	Order # 99-02-2	32					Page 2		
	03/16/99 09:23	<del></del>	TEST RES	ULTS BY SAN	IPLE	<u> </u>			
			02/02/09	Collected	02/03/99	Category:	AOTIROTIS		
	Sample: 01A C	OTFALL OUR	02/03/99	COTTecceus	. 02/03/33	category.	NG01001		
				Deter	ction				
	Mash Decemintic		Resu		nit	Units	Analyzed	By	
	Test Descriptic	EPA 405.1	<u>Kesu</u>	6 22	2		02/08/99	PT	
	5day CBOD, SUSPENDED SOLII			15	5		02/11/99	ĸĊ	
	SUSPENDED SUIT	3, MFR 100.2		20	-				
	Sample: 02A (	OUTFALL OOH	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS		
	Sampre. VZA		•=, •=, ••				~		
				Dete	ction				
	Test_Description		Resu	lt Li	mit	<u>Units</u>	Analyzed	By	
	COD,	EPA 410.4		DL	5	mg/L	02/19/99	LG	
	TOC,	EPA 415.1	2	.0	1	mg/L	02/09/99	WL	
	,								
	Sample: 03A	OUTFALL 00H	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS .		
	-								
	•				ction		• • •	_	
	<u>Test Description</u>	on	Resu		mit		Analyzed	By	
	AMMONIA N,	EPA 350.2	E	DL	0.5	mg/L	02/11/99	JB	~
							NOTTROTTO		
	Sample: 05A	OUTFALL 00H	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS		
				Doto	ction				
			Rest		mit	Units	Analyzed	By	
	Test Description		Rest		III.L.	-	<u>/mid19.000</u>	SD	
	EPA 625 SEMI V			-		-		SD	
	EXTRACTION,	EPA 608		-					
	Complex 063	OUTFALL 00H	02/03/99	Collected	1: 02/03/99	Category:	AQUEOUS		
	Sample: 06A	OUTFAIL OUT	02/05/55	001100000			~		
				Dete	ction				
	Test Descripti	on	Rest		mit	Units	<u>Analyzed</u>	By	
	ALUMINUM,	EPA 200.7			0.05	mg/L	02/15/99	RJE	
	ANTIMONY,	EPA 204.2	1	BDL 0.	.001 .	mg/L	03/05/99	RJE	
	ARSENIC,	EPA 206.2	1	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			.001	mg/L	02/13/99	RJE	
	BORON,	EPA 200.7			0.05	mg/L	02/15/99	RJE	
	CADMIUM,	EPA 213.2			0002	mg/L	03/08/99	RJE	
	CHROMIUM,	EPA 200.7			0.01	mg/L	02/13/99	RJE	
	COBALT,	EPA 200.7			0.01	mg/L	02/15/99	RJE	
	COPPER,	EPA 220.2			.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			.001	mg/L	03/05/99	RJE	
)	LITHIUM,	EPA 200.7			0.01	mg/L		RJE	

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

TEST RESULTS BY SAMPLE

Page 3

			Detection			
m Deseminti		Result		<u>Units</u>	<u>Analyzed</u>	By
Test Descript:	EPA 200.7		<u> </u>	mg/L	02/15/99	RJE
MAGNESIUM,	EPA 200.7	0.0		mg/L	02/13/99	RJE
MANGANESE,	EPA 245.1	BD	<b>.</b>	mg/L	02/15/99	RJE
MERCURY,			-			EP
METALS DIGEST		BD	. 0.01	mg/L	02/13/99	RJE
MOLYBDENUM,	EPA 200.7	· BD		mg/L	03/08/99	RJE
NICKEL,	EPA 249.2	BD		mg/L		RJE
SELENIUM,	EPA 200.7	BD	-	mg/L		RJE
SILVER,	EPA 272.2	0.0			02/15/99	RJE
STRONTIUM,	EPA 200.7	BD	•		03/08/99	RJE
THALLIUM,	EPA 279.2	. BD		mg/L		RJE
URANIUM	EPA 200.7			mg/L	02/13/99	RJE
ZINC,	EPA 200.7	BD	L 0.02			
Sample: 07A	OUTFALL 00H	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
-			Detection			
		Resul		Units	Analyzed	By
<u>Test Descript</u>		BI		mg/L	03/05/99	$\mathbf{LG}$
SULFIDE,	EPA 376.1	BI	-	mg/L	03/04/99	LG
TOTAL CYANIDE	E, EPA 335.2				•	
Sample: 08A	OUTFALL 00H	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
			Detection			
		Resu		<u>Units</u>	<u>Analyzed</u>	<u>By</u>
Test Descript	EPA 420.1	0.0		mg/L	02/23/99	JB
PHENOLICS,	EPA 420.1					
Sample: 09A	OUTFALL 00H	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
			Detection			
	ud am	Resu		<u>Units</u>	Analyzed	
Test Descrip	CION CTOURI MOUNT		DL 0.05 -	mg/L	02/04/99	ML
CHLORINE, RE	SIDUAL TOTAL	<u> </u>				
Sample: 10A	OUTFALL 00H	02/03/99	Collected: 02/03/99	9 Category	AQUEOUS	
			Detection			
	tion	Resu		<u>Units</u>		
Test Descrip			36 0.2	mg/L		
NITRATE-NITR	LIE N		DL 0.5	mg/L		
	OGENI					
ORGANIC NITE		-		mg/L		
PHOSPHORUS,	EPA 365.1	E	DL 0.1	mg/L mg/L		
		E	DL 0.1	-		

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

#### TEST RESULTS BY SAMPLE

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Sample:	11A	OUTFALL	00H
Dumpro.		<b>VVXXXMM</b>	

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02/03/99 Collected: 02/03/99 Category: AQUEOUS

				Detection	,		
<u>Test Description</u> OIL & GREASE,	•	413.1	Result BDL	Limit 5		<u>Analyzed</u> 02/04/99	
				-	· • •		

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

			<u>Detection</u>			
Test Description		Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
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

				Detection				
Τe	st Descr	iption	<u>Result</u>	Limit	<u>Units</u>	<u>Analyzed</u>	By	Ú
MI	THYLENE	BLUE ACTIVE SUB.	BDL	0.01	mg/L	02/17/99	ML	
SI	JLFATE,	EPA 375.4	19	10	mg/L	02/18/99	JB	
SU	JLFITE,		BDL	2	mg/L	02/17/99	ML	

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

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	Detection			
Test DescriptionResultASBESTOS WATERND	Limit 0.2	MF/L,	<u>Analyzed</u> 02/12/99	

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

		Detection			
Test Description	<u>Result</u>	Limit .			<u>By</u>
5day CBOD, EPA 405.1	82	2		02/08/99	
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

			Detection			
Test Descr	ription	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
COD,	EPA 410.4	331	20	mg/L	02/19/99	$\mathbf{LG}$
TOC,	EPA 415.1	19.9	1	mg/L	02/09/99	JW

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Order # 99-02-232

#### TEST RESULTS BY SAMPLE

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Sample: 18A OUTFALL 00B

02/03/99 Collected: 02/03/99 Category: AQUEOUS

.

<u>Test Descript</u> AMMONIA N,	<u>tion</u> EPA 350.2	Result 43.4	Detection Limit 0.5		<u>Analyzed</u> 02/12/99	
Sample: 20A	OUTFALL 00B	02/03/99 Colle	ected: 02/03/99	Category:	AQUEOUS	

			Detection	••	Duelered	<b>B•</b> •
Test <u>Description</u>		<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	
EPA 625 SEMI VOL. E	XTRACT	-		-		SD
	EPA 608	-		-	-	SD

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

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





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	- "		Page 6
	Order # 99-02-232	TEST RESULTS BY SAMPLE	5
	03/16/99 09:23	TEST RESOURCE BY BAR BA	
			Cohorana NOUROUS
	Sample: 22A OUTFALL 00B	02/03/99 Collected: 02/03/99	Category: Agonous
		Detection	
	Test_Description	Result Limit	<u>Units Analyzed By</u>
	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
		Detection	
		Result Limit	<u>Units Analyzed By</u>
	Test Description	BDL 0.01	mg/L 02/23/99 JB
	PHENOLICS, EPA 420.1		
	Sample: 24A OUTFALL 00B	02/03/99 Collected: 02/03/99	Category: AQUEOUS
		Detection	
		Detection	Units <u>Analyzed</u> By
1	Test Description	Result Limit	mg/L 02/04/99 ML
	CHLORINE, RESIDUAL TOTAL	BDL 0.05	
	Sample: 25A OUTFALL 00B	02/03/99 Collected: 02/03/99	Category: AQUEOUS
		Detection	
	Test Description	<u>Result</u> <u>Limit</u>	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
	Sample: 26A COIFALL COB		
		Detection	
	Test_Description	<u>Result</u> <u>Limit</u>	<u>Units Analyzed By</u>
	OIL & GREASE, EPA 413.1	BDL 5.	mg/L 02/04/99 PT
		02/03/99 Collected: 02/03/99	Category: AOUEOUS
	Sample: 27A OUTFALL 00B	02/03/99 Corrected: 02/03/9	
		Detection	
	Test Description	<u>Result</u> 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
	ADJUN-220, IR MAINA		-

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Order # 99-02-232 03/16/99 09:23	TEST RESULTS BY SAMPLE	Page 7
Sample: 28A OUTFALL 00B	02/03/99 Collected: 02/03/99	Category: AQUEOUS
Test Description METHYLENE BLUE ACTIVE SUB. SULFATE, EPA 375.4 SULFITE,	DetectionResultLimitBDL0.01BDL10BDL2	UnitsAnalyzedmg/L02/17/99mg/L02/18/99mg/L02/17/99

#### OUTFALL 00B Sample: 29A

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02/03/99 Collect	ed: 02/03/99	Category:	AQUEOUS
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		Detection			
Test_Description ASBESTOS WATER	Result ND	Limit	MF/L,	<u>Analyzed</u> 02/12/99	

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Page 7

<u>By</u> ML JB ML



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

#### TEST RESULTS BY SAMPLE

Page 8

Sample Description:	OUTFALL 00H	02/03/99 Lab No:	04A
Test Description:	EPA 624	Method:	624
Collected:	02/03/99	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	
TRICHLOROFLUOROMETHANE	BDL	2
CHLORODIBROMOMETHANE	BDL	2
TETRACHLOROETHYLENE	BDL	2
TOLUENE	BDL	2
TRICHLOROETHENE	BDL	2
VINYL CHLORIDE	BDL	10
XYLENES	BDL	10
SURROGATE %REC	OVERY	LIMITS
D4-1,2 DICHLOROETHANE	114	<u> </u>
D8-TOLUENE	93	88 - 110



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

TEST RESULTS BY SAMPLE

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

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02/03/99 Lab No: 04A Method: 624 Category: AQUEOUS

Test Code: 624\_X

4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

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



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

#### TEST RESULTS BY SAMPLE

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Sample	Description:	OUTH	ALL	00H	02/03/99	Lab No:	05A
Test	Description:	EPA	625	SEMI	VOLATILES	Method:	625
	Collected:	02/0	93/99	Ð		Category:	AQUEOUS

Test Code: 625\_AE

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00H 02/03 Test Description: EPA 625 SEMI VOLATILES Collected: 02/03/99

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02/03/99 Lab No: 05A TILES Method: 625 Category: AQUEOUS

Test Code: 625\_AE

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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
	BDL	10
ANTHRACENE	BDL	50
BENZO (GHI) PERYLENE	BDL	10
FLUORENE	BDL	10
PHENANTHRENE	BDL	50
DIBENZO (A, H) ANTHRACENE	BDL	50
INDENO(1,2,3-CD) PYRENE	BDL	10
PYRENE	BDL	100
ETHANOL AMINE	BDL	200
HYDRAZINE		

SURROGATE	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	88	<u> </u>	114
2-FLUOROBIPHENYL	77	43 -	116
p-TERPHENYL-d14	90	33 -	141
p-TERPHENID-014 PHENOL-d6	38	10 -	94
2-FLUOROPHENOL	32		100
2,4,6-TRIBROMOPHENOL	36	10 -	123

Notes and Definitions for this Report:

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EXTRACTED	<u>02/07/99</u>	
DATE RUN	<u>02/25/99</u>	
ANALYST	TC	
INSTRUMENT	GC/MS	
FILE ID _	<u>\$9022527</u>	
UNITS <u>uc</u>	<u>1/L</u>	
METHOD E	<u>PA 625</u>	
BDL BELC	W DETECTION	LIMIT



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

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#### TEST RESULTS BY SAMPLE

Page 12

Test Code: 608

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

SURROGATE	<b>%RECOVERY</b>	LIMITS	
DBC (SURROGATE, & RECOVERY)		<u>    70</u> - <u>   13</u>	0
2,4,5,6-TCX (SURROGATE % REC.)	94	<u> </u>	0

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

(937) 837-3744



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

#### TEST RESULTS BY SAMPLE

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

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Test Code: 608

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

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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	1	RESULT	LIMIT
TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE		BDL BDL	<u> </u>
SURROGATE NITROBENZENE-D5	%RECOVE 105		LIMITS 35 - 114

NITROBENZENE-DJ				<u> </u>
2-FLUOROBIPHENYL	1 <u>20 Q</u>	43	-	<u>    116</u>
p-TERPHENYL-d14	125	33	-	<u>141</u>
p-TERPHENTI di T	40	10	-	94
•••••	53	21	_	100
2-FLUOROPHENOL		10	_	123
2,4,6-TRIBROMOPHENOL	<u>150 Q</u>	10		

Notes and Definitions for this Report:

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

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

## TEST RESULTS BY SAMPLE

Page 15

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

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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	
DICHLOROBROMOMETHANE	BDL	
TRICHLOROFLUOROMETHANE	BDL	
CHLORODIBROMOMETHANE	BDL	
TETRACHLOROETHYLENE	BDL	
TOLUENE	BDL	
TRICHLOROETHENE	BDL	2
VINYL CHLORIDE	BDI	
XYLENES	BDI	10
	RECOVERY	LIMITS
SURROGATE		76 -

*RECOVERY	LIMITS	
112	76 -	114
93	88 -	110
	112	$\frac{112}{2} - \frac{76}{2}$

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

#### TEST RESULTS BY SAMPLE

Page 16

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

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

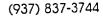
Test Code: 624\_X

4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

<u>86</u> - <u>115</u>

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





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

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## TEST RESULTS BY SAMPLE

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Sample Description:	OUTFALL	00B	02/03/99	Lab No:	20A .
Test Description:			VOLATILES	Method:	
Collected:				Category:	AQUEOUS

Test Code: 625\_AE

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	
BIS (2-CHLOROISOPROPYL) ETHER	BDL	
BIS (2-CHLOROETHOXY) METHANE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
HEXACHLOROCYCLOPENTADIENE	BDL	
ISOPHORONE	BDL	
NAPHTHALENE	BDL	
NITROBENZENE	BDL	
N-NITROSODIMETHYLAMINE	BDL	
N-NITROSODIPHENYLAMINE	BDL	
N-NITROSODI-N-PROPYLAMINE	BDL	
BIS (2-ETHYLHEXYL) PHTHALATE	BDL	10

Committed to Quality Since 1958

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B 02/03/99 Lab No: 20A Method: 625 Test Description: EPA 625 SEMI VOLATILES Collected: 02/03/99 Category: AQUEOUS BDL 10 BUTYL BENZYLPHTHALATE BDL 10 DI-N-BUTYL PHTHALATE BDL 10 DI-N-OCTYL PHTHALATE 10 DIETHYL PHTHALATE BDL

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

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

Notes and Definitions for this Report:

EXTRACTED (	2/07/99
DATE RUN 02	2/26/99
ANALYST TO	r 5
INSTRUMENT	GC/MS
FILE ID	<u>S9022605</u>
UNITS ug/1	<u>L</u>
METHOD EPI	<u>A 625</u>
BDL BELOW	DETECTION LIMIT

Committed to Quality Since 1958 Dayton, Ohio 45426

(937) 837-3744

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Test Code: 625\_AE



- 1 # 00 00 732	i	Page 19
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 -Category: AQUEOUS Collected: 02/03/99

Test Code: 608

PARAMETER	RESULT	LIMIT
PARAMETER ALDRIN ALPHA-BHC BETA-BHC DELTA-BHC GAMMA-BHC CHLORDANE 4,4-DDT 4,4-DDE 4,4-DDD DIELDRIN ALPHA ENDOSULFAN BETA ENDOSULFAN BETA ENDOSULFAN ENDOSULFAN SULFATE ENDRIN ENDRIN ALDEHYDE HEPTACHLOR HEPTACHLOR EPOXIDE PCB-1016 PCB-1221	RESULT BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL	$\begin{array}{c} 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 1\\ 0.020\\ 0.030\\ 0.10\\ 1\\ 2\end{array}$
PCB-1221 PCB-1232	BDL	1
PCB-1242	BDL BDL	<u> </u>
PCB-1248 PCB-1254	BDL	1
PCB-1260 TOXAPHENE	BDL BDL	

SURROGATE	<b>%RECOVERY</b>	LIMITS
DBC (SURROGATE, % RECOVERY)	93	<u> </u>
2,4,5,6-TCX (SURROGATE % REC.)		<u> </u>
2/1/5/6 2011(00111000		

Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 ANALYST JW GC INSTRUMENT FILE ID A020943 UNITS <u>uq/L</u>



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

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Test Code: 608

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METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

11 East Main Street

(937) 837-3744



Order # 99-02-232

03/16/99 09:23

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## 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 TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL		5
SURROGATE NITROBENZENE-D5 2-FLUOROBIPHENYL p-TERPHENYL-d14 PHENOL-d6 2-FLUOROPHENOL 2,4,6-TRIBROMOPHENOL			LIMITS <u>35</u> - <u>43</u> - <u>33</u> - <u>10</u> - <u>21</u> - <u>10</u> -	<u>114</u> <u>116</u> <u>141</u> <u>94</u> <u>100</u> <u>123</u>

Notes and Definitions for this Report:

EXTRACTED 02/08/99 DATE RUN 02/11/99 ANALYST \_MN INSTRUMENT <u>SATURN</u> FILE ID \_\_\_\_0206502W UNITS \_uq/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:

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

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

## Section III.B.6 and 7

## Additional Sample Data (Cook Nuclear Lab)

## 00B Aluminum

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Date	AI (ug/l)	Date	Al (ug/l)
2/3/99	220	1/19/02	113
8/30/01	4 26	1/19/02	12.2
8/30/01	7.27	1/19/02	13 3
8/30/01	136	1/19/02	19 3
8/30/01	196	1/19/02	16.3
8/30/01	157	1/19/02	13 5
8/30/01	189	1/19/02	16.2
8/30/01	169	1/19/02	22.9
8/30/01	218	1/19/02	17 5
8/30/01	17.4	1/19/02	16.8
8/30/01	219	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		1/19/02	19 5
8/31/01		1/19/02	22.6
8/31/01		1/19/02	27.4
8/31/01		1/19/02	37.5
8/31/01		1/19/02	32.4
8/31/01		1/19/02	42 9
1/17/02		1/19/02	36 2
1/17/02		1/19/02	43
1/17/02		1/19/02	43 5
1/17/02		1/19/02	53.1
1/18/02		1/19/02	44 4
1/18/02		1/19/02	493
1/18/02		1/19/02	62.4
1/18/02		1/19/02	503
1/19/02		1/19/02	50.3
1/19/02		1/19/02	
1/19/02		1/19/02	
1/19/02		1/19/02	1
1/19/02		Max	220
1/19/02		Max monthly	220
1/19/02		Count	87
1/19/02		Method	2007
1/19/02			
1/19/02		_ <u></u>	<u>I</u>

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	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
1	Max monthly	2.3
	Count	28
	Method	200.7

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## Section III.B.6 and 7

## Additional Sample Data (Cook Nuclear Lab)

# 00B Magnesium ug l

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	34	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	54
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		

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Non-routine sample data									
(Cook Nuclear Lab)									

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Date	Hydrazine ug/L	Date Hydrazine ug/L
1/25/01	206	5/26/02 1558
1/26/01	275	5/27/02 1285
8/30/01	310	5/28/02 1870
8/31/01	< 3	5/29/02 < 3
9/1/01	< 3	5/30/02 719
9/1/01	10085	5/31/02 1010
9/2/01	18000	6/1/02 2740
9/2/01	92658	6/2/02 555
9/2/01	59871	7/22/02 < 3
9/2/01	57710	7/28/02 16437
9/3/01	188000	7/29/02 50213
9/5/01	227626	7/30/02 14200
9/7/01	158310	7/31/02 22019
9/8/01	158220	8/1/02 13500
9/13/01	164277	8/2/02 620
9/20/01	140100	8/3/02 19
9/27/01	155939	
1/18/02	42	
1/20/02	80582	Max 270837
1/24/02	125000	Monthly Max 140376
1/29/02	140050	Count 53
1/31/02	99373	Method: ASTM D 1385
2/8/02	175116	QL: 3 ug/l
2/9/02	263222	DL: 10 ug/l
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	

## Section III.B.6

## Non-routine sample data (Cook Nuclear Lab)

## 00B Ethanolamine Method 300.0

Data		Ethanolamine mg/l	Data		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	Duio	1/25/01	4.39		2/6/01	147		/17/01	12.92	2/28/0	
	1/2/01	22.33	1/14		11.3		1/26/01	4.1		2/6/01	14 46	2	/17/01	12.73	2/28/0	
	1/2/01	22.33	1/1		10.7		1/26/01	1.22		2/6/01	14 29	2	/17/01	12 92	3/1/0	)1_
	1/2/01	22 31	1/1		10.7		1/26/01	3.76		2/6/01	14 59	2	/18/01	13 17	3/1/0	
	1/3/01	27.7	1/1		10 7		1/26/01	48		2/7/01	12.75	2	/18/01	13 41	3/1/0	
	1/3/01	27.6		5/01	10 7		1/27/01	31		2/7/01	13.04	2	/18/01	13.1	3/1/0	
	1/3/01	27.6		5/01	12		1/27/01	22		2/7/01		2	/18/01	13.06	3/2/0	
	1/3/01	28.4		5/01	12.1		1/27/01	3.7		2/7/01		2	/19/01	13.1	3/2/0	)1 ,
	1/4/01	10.16		5/01	11.9		1/27/01	36		2/8/01		2	/19/01	13.3	3/2/0	
	1/4/01	10.18		5/01	12		1/28/01			2/8/01		2	/19/01	13	3/2/0	
		8.76		7/01	12 3		1/28/01	3 23		2/8/01		2	/19/01	13	3/3/0	
	1/5/01			7/01	12 3		1/28/01	3 33		2/8/01		2	2/20/01	14.3	3/3/0	
	1/5/01	8.26		7/01	12.2		1/28/01			2/9/01		2	2/20/01	14.5	3/3/0	
	1/5/01	9.14 9.1		7/01	12.2		1/29/01			2/9/01		2	2/20/01	14.1	3/3/0	) <b>1</b> '
	1/5/01			B/01	14.7		1/29/01			2/9/01			2/20/01		3/4/0	
	1/7/01	7.41		B/01	14.6		1/29/01			2/9/01		2	2/21/01	12 4	3/4/0	
	1/7/01	7.46		8/01	14.3		1/29/01			2/10/01		:	2/21/01	11.34	3/4/0	01
	1/7/01	7.31		8/01	14.5		1/30/01			2/10/01		:	2/21/01	12.29	3/4/0	
	1/7/01	7.31		9/01	14 5		1/30/01			2/10/01		:	2/21/01	12.31	3/5/0	01
	1/8/01	7.76		9/01 9/01	14 8		1/30/01			2/10/01			2/22/01		3/5/0	01
	1/8/01	8 02		9/01	14.5		1/30/01			2/11/01		:	2/22/01	14.3	3/5/0	01
	1/8/01	7 95		9/01 9/01			1/31/01			2/11/01		:	2/22/01	14.1	3/5/0	01
	1/8/01	7.88		9/01 0/01			1/31/01			2/11/01			2/22/01		3/6/0	01
	1/9/01	9 93					1/31/01			2/11/01			2/23/01		3/6/	01
	1/9/01	10.12		0/01			1/31/01			2/12/01			2/23/01		3/6/	01
	1/9/01	10.13		0/01			2/1/01			2/12/01			2/23/01		3/6/	01
	1/9/01			0/01			2/1/01			2/12/01			2/23/01		3/7/	01
	1/10/01			1/01			2/1/01			2/12/01			2/24/01		3/7/	01
	1/10/01			1/01			2/1/01			2/13/01			2/24/01		3/7/	01
	1/10/01			1/01			2/2/01			2/13/01			2/24/01		3/7/	01
	1/10/01			1/01			2/2/01			2/13/01			2/24/0 <sup>.</sup>		3/8/	01
	1/11/01			2/01			2/2/01			2/13/01			2/25/0 <sup>.</sup>		3/8/	01
	1/11/01			2/01			2/2/01			2/14/01			2/25/0 <sup>-</sup>	1 10.785	3/8/	01
	1/11/01			2/01			2/3/01			2/14/01			2/25/0 <sup>-</sup>	1 10 877	3/8/	01
	1/11/01			2/01			2/3/01			2/14/0			2/25/0 <sup>-</sup>		3/9/	01
	1/11/01			23/01 23/01			2/3/01			2/14/0			2/26/0	1 11.9	3/9/	01
	1/12/01			23/01			2/3/01			2/15/0			2/26/0		3/9/	'01
	1/12/01						2/4/0			2/15/0			2/26/0	1 11.921	3/9/	'01
	1/12/01			23/01			2/4/0			2/15/0			2/26/0		3/10/	/01
	1/12/01			24/01			2/4/0 2/4/0			2/15/0			2/27/0		3/10/	
	1/13/01			24/01			2/4/0 2/4/0			2/16/0			2/27/0		3/10/	
	1/13/01			24/01			2/4/0 2/5/0			2/16/0			2/27/0		3/10/	
	1/13/01			24/01			2/5/0 2/5/0			2/16/0			2/27/0		3/11/	
	1/13/01			25/01			2/5/0 2/5/0			2/16/0			2/28/0		3/11/	
	1/14/01			25/01			2/5/0 2/5/0			2/17/0			2/28/0		3/11/	
	1/14/01	11.7	1/	25/01	2 98		2/5/0	1 13 04		2,110	, 1200					

					(Cook Nuc	lear Lab)				Method 300.
Ethanolamine mg/l		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	66	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 0 9	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

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Section III.B.6

## Non-routine sample data (Cook Nuclear Lab)

## 00B Ethanolamine Method 300.0

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Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	Date	Ethanolamine mg/i	Date	Ethanolamine mg/l	Date	Ethanolamine mg/l	
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		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	` 7/10/0 <del>1</del>
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		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		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		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		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		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		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		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		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		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		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		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		5/28/01	10 68	6/9/01	8.15	6/20/01	12.3	7/5/01		7/21/01
5/17/01		5/29/01		6/9/01	8 22	6/20/01	12 01	7/5/01	13.1	7/22/01
5/18/01		5/29/01		6/9/01	8 07	6/20/01	12.15	7/5/01	13	7/22/01
5/18/01		5/29/01		6/9/01	8 09	6/21/01	11 99	7/6/01	13 05	7/22/01
5/18/01		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

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Se	ction	.В.	.b

## Non-routine sample data (Cook Nuclear Lab)

## 00B Ethanolamine Method 300.0

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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	816
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 42.8
4.64	7/25/01	12.97 12 79	8/6/01	12 22	9/1/01	2 33	9/27/01	46.8	2/13/02 2/13/02	
6.176 6.17	7/26/01 7/26/01	1279	8/6/01 8/6/01	12.58 12.16	9/1/01 9/1/01	3 29 8.8	9/27/01 1/2/02	54.1 13 2	2/15/02	38.7 64
6.18	7/26/01	12.8	8/6/01	12.10	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 1/29/02	17.4	3/6/02	7.6 8.58
9.78	8/1/01	12 25	8/25/01	7 07	9/4/01	97.7 94 8	1/29/02	20 6	3/6/02 3/13/02	7.02
9.86	8/1/01	12.15	8/26/01	781	9/5/01 9/5/01		1/29/02	21.9 21.6	3/13/02	7.36
9.71	8/1/01 8/2/01	12.16 11.9	8/26/01 8/27/01	7 84 7.92	9/5/01	108 117	1/29/02	20.5	3/13/02	6.86
9.74 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	12.2	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
(	2.2.31				(					ſ
(					(					1

Section III.B.6

## Non-routine sample data (Cook Nuclear Lab)

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	99
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	69	7/3/02	2.75	9/25/02	12 34
4/10/02	68	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	83
4/24/02	6.76	7/17/02	9.74	10/2/02	82
4/24/02	7.01	7/17/02	9.12	10/2/02	83
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		10/16/02	12 54 12 61
5/1/02	11	7/31/02		10/16/02 10/16/02	13
5/8/02	643	7/31/02		10/16/02	12.3
5/8/02	6.41	7/31/02		10/10/02	13.9
5/8/02	646	7/31/02 8/7/02		10/23/02	13 5
5/8/02		8/7/02		10/23/02	14.1
5/15/02		8/7/02		10/23/02	13.8
5/15/02 5/15/02		8/7/02		10/30/02	
5/15/02		8/14/02		10/30/02	
5/22/02		8/14/02		10/30/02	
5/22/02		8/14/02		10/30/02	
5/22/02		8/14/02		11/6/02	
5/22/02		8/21/02		11/6/02	
5/29/02		8/21/02		11/6/02	
5/29/02		8/21/02		11/6/02	
5/29/02		8/21/02			
5/29/02		8/28/02		Max	149
6/5/02		8/28/02		Monthly Avg	66 3
				Count	1122

00B Ethanolamine Method 300.0

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## 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

FAG	CILIT	Y NAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
		Donald C. Cook Nuclear Plant	MI0005827	00B
9	Wai	TER TREATMENT ADDITIVES ter treatment additives include any material that is added to water us it the water.	ed at the facility or to a wastewater generated by	the facility to condition or
		provals of water treatment additives are authorized by the DEQ und stitute approval of the water treatment additives that are included in the		NPDES permit does not
	A. /	Are there water treatment additives in the discharge from this facility?		
		No, proceed to item 4		
	$\boxtimes$	Yes.		
	в. І	Have these water treatment additives been previously approved?		
		No, continue with C below.		
		Yes Submit a list of the previously approved water treatment addition updated if it has changed since the previous approval	ves and the date they were approved. The information	tion listed in C. 1-8 must be
		Submit a list of water treatment additives that are or may be discharge additive.	ed from the facility. Applicants must submit the info	ormation listed below for each
	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 addit	ive receives prior to discharge.	$\downarrow$
	6	The water treatment additive function (i e , microbiocide, flocculant,	etc.).	
	7.	A 48-hour LC50 or EC50 for a North American freshwater planktonic	c crustacean (either Cenodaphnia sp., Daphnia sp.	, or Simocephalus sp.)
	8.	The results of a toxicity test for one other North American freshwate requirement of Rule 323 1057(2)(a) of the Water Quality Standards a rainbow trout, bluegill, or fathead minnow		
	on t	required toxicity information (described in items 7 and 8 above) is c the DEQ's Internet page http://www.deq.state.mi.us/swq/gleas/d tives on this list, only the information in items 1 through 6 above need	ocs/wta/WTAIIst.doc. If you intend to use one	
	Note	e: The availability of toxicity information for a water treatment additive	does not constitute approval to discharge the wate	er treatment additive.
10	WH	OLE EFFLUENT TOXICITY TESTS		
		e any acute or chronic WET tests been conducted on any discharges s, identify the tests and summarize the results below unless the test l		
NO				

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PLEASE TYPE OR PRINT

- .

FACILITY NAME Donald C. Cook Nuclear Plant	NPDES or COC PERMIT NUMBER MI0005827	Outfall Number 00B
9 WATER TREATMENT ADDITIVES		
Water Treatment Additive	Approval Dat	e
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, NPD	ES Permit approval 9/28/95.
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	i	
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# Section III.B Outfall 00C



B. Outfall Information

<sup>7</sup>omplete a separate Section III.B - Outfall Information (pages 26-31) for each outfall at the facility Make copies of this blank section <sup>7</sup> of the application for additional outfalls as necessary.

_		YPE OR PRINT				000 000		OUTFALL NUMBER					
FAC	ILITY	NAME	la en Dta at			DES PERMIT I 005827	NUMBER	000					
		Donald C Cook Nuc					,, <u>, , , , , , , , , , , , , , , , , ,</u>		· · · · · · · · · · · · · · · · · · ·				
1.	OUTI	FALL INFORMATION (see page	ge 25 for instru	iction on com	pietion of this p	bage)			<u> </u>				
		Watershed			<u></u>								
	Α.	Lower St. Joseph											
	в	Receiving Water											
		Lake Michigan				Township							
	С	County Berrien				Lake							
	_	1/4, 1/4	1/4		Section		Town	Range					
	D.	ŚŴ	NW		06		06S	19W					
	E.	Latitude				Longitude 86 34' 30"							
		41 58' 30"				00 34 30	······						
	F.	Type of Wastewater Discharg	ed (Check all	that apply to I	this outfall)								
	••			nitary Wastew		Ground	water Cleanup	Storm V	Vater (regulated)				
		Contact Cooling	_	•			-						
		Noncontact Cooling	🛛 Pro	cess Wastew	ater	Hydrosi	tatic Pressure Test		Vater (not regulated)				
		Storm water subject to eff	luent guideline	s (indicate ur	nder which cate	egory)	_						
		Other - specify (see "Tab	e 8 - Other Co	mmon Types	of Wastewate	r" in appendix)							
J	J	What is the maximum Facility	Design Flow F	Rate: 0 043	MGD								
	н.	Continuous Dischargers       0 043       MGD Continue with Item I.         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						
	<b>I.</b>	Continuous Discharge How often is there a discharge Batch dischargers must pr Is there effluent flow equaliza Batch Peak Flow Rate	ovide the follo		onal informati		y <u>365</u> Days/Yea	ar					
									-				
				Minimum	<u>۱</u> ــــــــــــــــــــــــــــــــــــ	/	Average	Ma	iximum				
1 -		Batch Volume (gallon	s)										
ž	-	Batch Duration (minut	les)	× , •					-				
1	,	<sup>~</sup> L	l										
<u> </u>		· · · ·		-									

B. Outfall Information

PLEASE TYPE	OR PRINT		
ACILITY NAM		NPDES PERMIT NUMBER	OUTFALL NUMBER
PLEASE TYPE OR PRINT       NPDES PERMIT NUMBER       OUTFALL NUMBER         ACILITY NAME       NPDES PERMIT NUMBER       OUTFALL NUMBER         Donald C. Cook Nuclear Plant       NU0005827       OUTFALL NUMBER         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 in 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 the 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 reasonate potential to be present in the discharge. To submit additional information see page ii, item 8.         PROCESS INFORMATION       A. Name of the process and provide measures of production (see the instructions to determine the appropriate information to be reported): Plant Heating Boiler Blowdown         B. SIC or NAICS code: <u>4911</u> C. Describe the process contributing to the discharge			
This inform the type of application process. 1	ation is used to determine the applicable federal refacility Page 7 of the appendix contains an abbre For assistance call the Permits Section. All indus the wastestream is not regulated under federal cat	gulations for this discharge. The information requestion requestion the types of stries shall provide the name of each process and egorical standards, the applicant shall report all provide the report shall report all provide the string standards.	Information each shall report in this d the SIC or the NAICS code for the
		leating Boiler Blowdown	
B. SIC or	NAICS code: 4911		
C. Descrit Heating	e the process and provide measures of production Boiler Blowdown. 0 043 MGD Maximum flow. 224	(see the instructions to determine the appropriate 47 MWE total plant electrical generation.	Information to be reported). Plant
B SIC or	NAICS code:		
C. Descrit	e the process and provide measures of production (	(see the instructions to determine the appropriate	information to be reported)
	INFORMATION of the process contributing to the discharge:		
B SIC or	NAICS code:		
C Descrit	e the process and provide measures of production (	(see the instructions to determine the appropriate	information to be reported).
	INFORMATION of the process contributing to the discharge'		
B. SIC or	NAICS code.		
C. Describ	e the process and provide measures of production (	see the instructions to determine the appropriate	information to be reported):
	INFORMATION f the process contributing to the discharge:		
B. SIC or I	NAICS code:		
C. Describ	e the process and provide measures of production (	see the instructions to determine the appropriate i	information to be reported).

B. Outfall Information

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

In accordance with 40 CFR 122.21, all applicants must report CBOD5, 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 81/2" 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<sub>5</sub>, total phosphorus, COD, TOC, ammonia nitrogen and total suspended solids use 24hour 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 in and in 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, BOD5, 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.

B. Outfall Information

PLEASE TYPE OR PRINT				· · · · · · · · · · · · · · · · · · ·	
ACILITY NAME			UMBER		
				000	
					ige.
Check this box if additional information is included	NAME Donald C. Cook Nuclear Plant       NPDES PERMIT NUMBER Mitoo5827       OUTFALL N 00C         Denald C. Cook Nuclear Plant       Monossi Completing this page are on the facing page.         Deck this box if additional information is included as an attachment. To submit additional information see page ii, item 8       Number of Analysis         Parameter       Maximum Daily       Maximum Concentration       Units       Analyses         Parameter       Iconcentration       Units       Analyses       Analyses         cal Oxygen Demand - five day (BOD <sub>4</sub> )       4       mg/l       2       X         amical oxygen demand)       10       10       mg/l       2       X         al organic carbon)       3       3       mg/l       2       X         Nitrogen (as N)       0.08       0.06       mg/l       1       X         pended Solids       17.8       8.9       mg/l       14       X         dual Chionne       <0.08				
	Nuclear Plant         M0005827         000           STICS - CONVENTIONAL POLLUTANTS - Instructions for completing this page are on the facing page.         Instructions for completing this page are on the facing page.           Information is included as an attachment.         To submit additional information see page it, tem 8         Number of Analyses         Sam           Image: Sam attachment.         To submit additional information see page it, tem 8         Number of Analyses         Sam           Image: Sam attachment.         To submit additional information see page it, tem 8         Number of Analyses         Sam           Image: Sam attachment.         To concentration         Units         Number of Concentration         Sam           Image: Sam attachment.         To 008         Oo8         mg/l         2         Sam           Image: Sam attachment.         To 008         Oo8         mg/l         2         Sam           Image: Sam attachment.         To 8         9         mg/l         14         Sam           Image: Sam attachment.         Concentration         Image: Sam attachment.         Sam         Sam           Image: Sam attachment.         To 8         9         mg/l         14         Sam         Sam           Image: Sam attachment.         Contentration         Image: Sam         Image: Sam <td>· ····································</td>		· ····································		
	Daily Tree		Per trais	Number of	
	Concentration	Concentration	Units 🖘 🗋	* Analyses 5-	Sample Type
Biochemical Oxygen Demand - five day (BOD <sub>4</sub> )	4	4	mg/l	2	Grab
COD (Chemical oxygen demand)	10	10	mg/l	2	24 Hr Comp
TOC (Total organic carbon)	3	3		2	🛛 24 Hr Comp
	0.00		ma/l	_	
	0.08	0.08		2	24 Hr Comp
Total Suspended Solids	17.8	89	mg/i	14	Grab
Total Dissolved Solids	NA	NA	mg/l	NA	24 Hr Comp
			mc/l		Grab
Total Phosphorus (as P)		<0.1		1	24 Hr Comp
Fecal Coliform Bacteria (report geometric moone)		NA	counts/100ml		
redai dointonn bacteria (report geometric means)	<u>INA</u>			NA	Grab
stal Residual Chlonne	<0.08	<0 08		2	Grab
	minimum daily				Grab
Dissolved Oxygen	0		trig/i	22	24 Hr Comp
pH			standard units		🖾 Grab
(report maximum and minimum of individual samples)	10	97		22	
Temperature, Summer	* NA	NA	୲୳ୖ	NA	
					Grab
Temperature, Winter	* NA	NA	LI°F LI°C	NA	
	_		ma/l		
Oil & Grease	<5	<5			Grab
Hydrazine	0.04	0.013	mg/l	22	Grab
				22	
Ethanolamine	16.1	11 3	mg/l	20	24 Hr Comp
					Grab
T & d & d					24 Hr Comp
See Attached for additional Data					Grab
					24 Hr Comp
* NA - Internal Outfall					Grab
					24 Hr Comp
					24 Hr Comp
					24 Hr Comp
					Grab
				<u>_</u>	24 Hr Ca
				·	Grab
			l		24 Hr Comp

B. Outfall Information

CLEASE TYPE OR PRINT		
ACILITY NAME Donald C. Cook Nuclear Plant	NPDES PERMIT NUMBER MI0005827	OUTFALL NUMBER
4. PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATI	r must submit the results of at least one effluent ana	lysis for <u>selected</u> organic pollutants
identified in Table 2 (as determined from Table 1, <u>Testing R</u> identified in Table 3. Existing primary industries must also p 2 known or believed to be present in facility effluent	equirements for Organic Toxic Pollutants by Industri	al Calegory), and all the pollutarity
In addition, submit the results of all other effluent analyses pe		
New primary industries that propose to discharge process w Tables 2 and 3 expected to be present in facility effluent.	vastewater must provide an estimated effluent conc	entration for any chemical listed in
5 DIOXIN AND FURAN CONGENER INFORMATION Existing industries that use or manufacture 2,3,5-trichloroph TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate trichlorophenol (TCP) or hexachlorophrene (HCP), or knows facility effluent, must submit the results of at least one effluen dioxin and furan congeners must be conducted using EPA M	e (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) p or has reason to believe that 2,3,7,8-Tetrachlorodib nt analysis for the dioxin and furan congeners listed	penzo-p-dioxin (TCDD) is present in
In addition, submit the results of all other effluent analyses p	performed within the last 5 years for any dioxin and fu	iran congener listed in Table 6
New industries that expect to use or manufacture 2,3,5-trice 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropic trichlorophenol (TCP) or hexachlorophrene (HCP), or knows facility effluent must provide estimated effluent concentration	chlorophenoxy acetic acid (2,4,5-T), 2- (2,3,5-trichlo onate (Erbon), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) s or has reason to believe that 2,3,7,8-Tetrachlorodit	rophenoxy) propanoic acid (Silvex, phosphorothionate (Ronnel), 2,4,5- penzo-p-dioxin (TCDD) is present in
<ul> <li>OTHER INDUSTRY PRIORITY POLLUTANT INFORMATIO Existing secondary industries, or existing primary industries analysis for any chemical listed in Tables 2 and 3 known or b</li> </ul>	that discharge non-process wastewater, must subm	it the results of at least one effluent
In addition, submit the results of all other effluent analyses p	erformed within the last 5 years for any chemical liste	ed in Tables 2 and 3
New secondary industries, or new primary industries that concentration for any chemical listed in Tables 2 and 3 expe	t propose to discharge non-process wastewater, r octed to be present in facility effluent	nust provide an estimated effluent
<ol> <li>ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMA All existing industries, regardless of discharge type, must p believed to be present in facility effluent, and a measured or be present in facility effluent. In addition, submit the result Tables 4 and 5</li> </ol>	provide the results of at least one analyses for any or r estimated effluent concentration for any chemical lis Its of any effluent analysis performed within the las	sted in Table 5 known of believed to st 5 years for any chemical listed in
New industries, regardless of discharge type, must provide a be in facility effluent.	an estimated effluent concentration for any chemical	listed in Tables 4 and 5 expected to
8 INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED New or existing industries, regardless of discharge type, m injurious chemicals known or believed to be present in fa effluent data that are less than 5 years old for these chemical	nust provide a measured or estimated effluent cond acility effluent that have not been previously identi	centration for any toxic or otherwise fied in this application. Quantitative
NOTE: All effluent data submitted in response to questions see page ii, item 8 If the effluent concentrations are es completed for each data row: Parameter, CAS No., Conc See page II, number 5 for analytical test requirements.	stimated, place an E in the "Analytical Metrico" co	iunin The following licids must be
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B. Outfall Information

## PLEASE TYPE OR PRINT

FACILITY NAME Donald C. Cook Nucl	ear Plant					PDES PERM	IT NUMBER			OUTFALL N 00C	UMBER				
	E 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	A STATE		1.1.1.1	e di .
PARAMETER	CAS No.	*: Conc : (ug/l) ::-:	··· Conc. › · ···· (ug/l) `··	Conc (ug/l)	Conc. (ug/l)	Conc. (ug/l)	Conc./ :	Conc. (ug/l)	Conc (ug/l)	Conc. (ug/l)	Conc. (ug/l)	Sample	Analytic al	a SQL a	DL.
Hyrazınə	7803578	12	15.3	13	5.1	87	40	<2.0	8	63	<3.0	Grab	D1385	3	10
Ethanolamine	141435	700	600	600	<500	4000	3900	2200	13100	16100	13600	Grab		800	300
See Attached															
for additional															
data.															
														<u></u>	
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## Section III,B.6 and 7

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## Additional Sample Data Summary Sheet

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#### For Outfall 00C

Parameter	2/1/99	5/14/01	21	Max Daily	Analytical Method	monthly	# of Analyses
Table 2 minutes and a second	CHRUCZDADIN		ner state for	St Carty in 19	Frite Castler	SMAL TENY	era kata
See Attached data set from Be	elmonte Park Laborate	ories.					
Table 3 And the second	With Allant,	· Ale was a Real	and shife a	al proceedings	Re- Contracti	stan 1387.1	STAR WAS
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/i)	<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	272.2/2007	<0.5	2
Thatlium -(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	A-A-MAR VANTE (A)	是安东南南部省省是中国	Sec. 1 1	AL AL AL AND	F. F. Herrichter	.,374-47C.D.4	warma Kit
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 Belmor	te Park Laboratories	is attached.				1	
Table 5	BARDARA BRA	stor, Theat's doing t	<b>动动动力</b> 。2	VIX 2000 L	·	357.1. 53.20	i s s s s s s s s s s s s s s s s s s s
Additional Data From Belmor	nte Park Laboratories	is attached.					<u> </u>
See Attached data set From (				,			l

00C

00C (	data
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Cook Plant Lab.	C'therelever.				
Date	Ethanolamine mg/L	Hydrazine ug/L			
8/30/01	iiig/c				
9/19/01					
10/1/01					
12/14/01					
12/14/01					
12/18/01					
5/13/02	1	31			
5/14/02	2.1	< 3 0			
5/15/02	23	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	06	6.3			
5/27/02		11.3			
5/28/02	< 0.5	85			
5/28/02	< 0.5	74			
5/28/02					
5/28/02	06	13 8			
5/29/02	09	13 9			
5/30/02	06	15 3			
5/30/02	07	12			
5/31/02	06	13			
5/31/02		12.4			
6/1/02	< 0.5	5.1			
6/1/02	4	8.7			
6/2/02	39	40		1	
6/2/02			• • • • • • • • • • • • • • • • • • •		····
10/17/02	22	< 2.0			
10/18/02	13 1	8			
10/18/02	16 1	63			
10/19/02		1		· /· -	
10/19/02	13 6	< 3 0			
	· · · · · · · · · · · · · · · · · · ·			-	
Maxi	16 1	40			
Max Monthly	11 3	13			
Count	20	22			
Min					<u> </u>
<u>+</u>	• •			· [····	



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

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Attn: BLAIR ZORDELL

Purchase Order: 4307976 Invoice Number:

ND= NONE DETECTED OHIO CERT.# 12345

### SAMPLE IDENTIFICATION

	Comple		Sample		:	Sample		Sample	
	Sample		scription	•	1	Number	De	scription	
	Number	OUTFALL		02/01/99		24	OUTFALL	00G	02/01/99
	01			02/01/99		25	OUTFALL	00G	02/01/99
	02	OUTFALL		02/01/99		26	OUTFALL	00G	02/01/99
	03	OUTFALL		02/01/99		27	OUTFALL		02/01/99
	04	OUTFALL		02/01/99		28	OUTFALL		02/01/99
• •	05	OUTFALL				29	OUTFALL		02/01/99
	06	OUTFALL		02/01/99		30	OUTFALL		02/01/99
	07	OUTFALL		02/01/99		31	OUTFALL		02/01/99
	08	OUTFALL		02/01/99			OUTFALL		02/01/99
	09	OUTFALL		02/01/99		32	OUTFALL		02/01/99
	10	OUTFALL		02/01/99		33	OUTFALL		02/01/99
	11	OUTFALL	001	02/01/99		34	OUTFALL		02/01/99
	12	OUTFALL	001	02/01/99		35	OUTFALL		02/01/99
	13	OUTFALL	001	02/01/99		36			02/01/99
	14	OUTFALL	001	02/01/99		37	OUTFALL		02/01/99
	15	OUTFALL	001	02/01/99		38	OUTFALL		02/01/99
	16	OUTFALL	00G	02/01/99		39	OUTFALL		02/01/99
	17	OUTFALL	00G	02/01/99		40	OUTFALL		• •
	18	OUTFALL		02/01/99		41	OUTFALL		02/01/99
	19	OUTFALL		02/01/99		42	OUTFALL		02/01/99
	20	OUTFALL		02/01/99		43	OUTFALL		02/01/99
	21	OUTFALL		02/01/99		44	OUTFALL		02/01/99
	22	OUTFALL		02/01/99		45	OUTFALL	000	02/01/99
	22	OUTFALL		02/01/99					
	2J		000						

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

Committed to Quality Since 1958 Dayton, Ohio 45426

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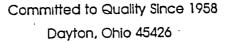


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Page 2

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".

Certified By MATT LAKE





Page 3

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

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#### TEST RESULTS BY SAMPLE

02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 01A Detection Units <u>Analyzed</u> Bv Limit Result Test Description mg/L 02/08/99 PT 2 3 5day CBOD, EPA 405.1 mg/L 02/11/99 KC 5 BDL SUSPENDED SOLIDS, EPA 160.2 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 02A Detection Units Analyzed By Limit Result Test Description mg/L 02/19/99 LG 5 6 EPA 410.4 COD, mg/L 02/09/99 JW 1 4.5 EPA 415.1 TOC, 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 03A Detection Units Analyzed By Limit Result Test Description mg/L 02/11/99 JB 0.5 BDL EPA 350.2 AMMONIA N, 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 05A Detection Units Analyzed By Limit Result Test Description SD EPA 625 SEMI VOL. EXTRACT SD EPA 608 EXTRACTION, 02/01/99 Collected: 02/01/99 Category: AQUEOUS Sample: 06A OUTFALL 001 Detection Units Analyzed <u>By</u> <u>Result</u> <u>Limit</u> mg/L 02/12/99 RJE Test Description 0.05 0.05 EPA 200.7 ALUMINUM, 03/05/99 RJE mg/L 0.001 BDL EPA 204.2 mg/L 03/05/99 RJE ANTIMONY, 0.001 BDL EPA 206.2 mg/L 02/11/99 RJE ARSENIC, 0.005 0.021 EPA 200.7 BARIUM, mg/L 02/11/99 RJE 0.001 BDL EPA 200.7 mg/L 02/12/99 RJE BERYLLIUM, 0.05 0.07 EPA 200.7 mg/L 03/08/99 RJE BORON, 0.0002 BDL EPA 213.2 mg/L 02/11/99 RJE CADMIUM, 0.01 BDL EPA 200.7 mg/L 02/11/99 RJE CHROMIUM, 0.01 BDL EPA 200.7 mg/L 03/08/99 RJE COBALT,



COPPER,

IRON,

Committed to Quality Since 1958

BDL

BDL

BDL

0.01

EPA 220.2

EPA 200.7

EPA 239.2

EPA 200.7

Dayton, Ohio 45426

0.001

0.001

0.01

0.1

RJE

RJE

mg/L 02/11/99

mg/L 03/05/99

mg/L 02/12/99 RJE



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TEST RESULTS BY SAMPLE

Page 4

				Т	Detect	ion			
	Test Description		Resul	-	Limi		Units	Analyzed	By
		A 200.7		1		1	mg/L	02/12/99	RJE
		A 200.7	BI		0.0	1		02/11/99	RJE
	-	A 245.1	BI	л.	0.000	2	mg/L		RJE
	METALS DIGESTION,	WATER		-			-		EP
	MOLYBDENUM, EPA	A 200.7	BI	Ъ	0.0	1	mg/L	02/11/99	RJE
	NICKEL, EPA	A 249.2	BI	)L	0.00	5	mg/L	03/08/99	RJE
•	SELENIUM, EPA	A 200.7	BI	)L	Ο.	1	mg/L	02/11/99	RJE
	SILVER, EPA	A 272.2	BI	л.	0.000	)5	mg/L	03/08/99	RJE
	STRONTIUM, EPA	A 200.7	0.1	L2	0.0	)1	mg/L	02/12/99	RJE
	THALLIUM, EPA	A 279.2	BI	)L	0.00	)1	mg/L	03/05/99	RJE
	URANIUM EPA	A 200.7	BI	)L	٥.	1	mg/L	02/15/99	RJE
	ZINC, EPA	A 200.7	BI	)L	0.0	2	mg/L	02/11/99	RJE
	Sample: 07A OUTFAI	LL 001	02/01/99	Colle	cted:	02/01/99	Category:	AQUEOUS	~
X									\ _
/	Meen Decemination		Deau	-	<u>Detect</u> Limi			7001.000	Dee
	Test Description SULFIDE, EPA	A 376.1	<u>Resul</u> BI			1	<u>Units</u> mg/L	<u>Analyzed</u> 03/05/99	<u>By</u> LG
	-	A 335.2	BI		0.0		mg/L	03/03/99	LG LG
	IOTAL CIANIDE, EPA	H 333.2	51		0.0		iligy 1	03/04/33	ЪG
	Sample: 08A OUTFAI	LL 001	02/01/99	Colle	cted:	02/01/99	Category:	AQUEOUS	
				1	Detect	ion			
	Test_Description		Resu	lt .	Limi	lt	Units	Analyzed	By
		A 420.1	BI	DL .	0.0	01	mg/L	02/23/99	JB
							<b>.</b> .		
	Sample: 09A · OUTFA	LL 001	02/01/99	COITE	ctea:	02/01/99	Category:	AQUEOUS	
					Detect	zion			
	Test Description		Resu	lt	Limi	it	Units	<u>Analyzed</u>	By
	CHLORINE, RESIDUAL	TOTAL	BI	DL	0.0	05	mg/L	02/03/99	ML
			00/01/00	<b>G</b> -11-			0 - h	NOTTOTIC	
	Sample: 10A OUTFA	LL 001	02/01/99	COLTS	creat	02/01/99	Category:	AQUEOUS	
					Detect	tion			
	<u>Test Description</u>		Resu	<u>lt</u>	Lim		<u>Units</u>	Analyzed	By
	NITRATE-NITRITE N		0.			. 2	mg/L		LG
	ORGANIC NITROGEN			DL		.5	mg/L		JB
		A 365.1	0.			.1	mg/L		LG
	TKN, EP	A 351.3	B	DL	0	.5	mg/L	02/06/99	JB
2		-							X
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Page 5

Order # 99-02-060 03/16/99 09:22 2

TEST RESULTS BY SAMPLE

02/01/99 Collected: 02/01/99 Category: AQUEOUS Sample: 11A OUTFALL 001 Detection Units Analyzed By <u>Limit</u> Result Test Description mg/L 02/10/99  $\mathbf{PT}$ 5 BDL EPA 413.1 OIL & GREASE, 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 12A Detection Units Analyzed By Limit Result Test Description pCi/L 03/08/99 SF 3 BDL IN WATER pCi/L 03/08/99 SF GROSS ALPHA, Δ BDL IN WATER GROSS BETA, pCi/L 03/10/99 SF 1 BDL IN WATER RADIUM, pCi/L 03/10/99 SF 1 BDL IN WATER RADIUM-226, 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 13A Detection Units Analyzed By <u>Limit</u> Result Test Description mg/L 02/17/99 ML BDL 0.01 METHYLENE BLUE ACTIVE SUB. JB mg/L 02/18/99 10 BDL EPA 375.4 SULFATE, mg/L 02/17/99 ML 2 BDL SULFITE, 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 001 Sample: 14A . Detection Units Analyzed BY Limit Result Test Description MF/L, >10um 02/12/99 ΕM 0.2 ND ASBESTOS WATER 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 00G Sample: 16A Detection Units Analyzed By Limit Result Test Description mg/L 02/08/99 PT 2 4 EPA 405.1 mg/L 02/11/99 KC 5day CBOD, 5 BDL SUSPENDED SOLIDS, EPA 160.2 02/01/99 Collected: 02/01/99 Category: AQUEOUS OUTFALL 00G Sample: 17A Detection Units Analyzed By Limit ' Result mg/L 02/19/99 Test Description LG 5 BDL EPA 410.4 JW mg/L 02/09/99 COD, 1 2.1 EPA 415.1 TOC,



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#### TEST RESULTS BY SAMPLE

Page 6

Sample: 18A OUTFALL 00G	02/01/99 Collected: 02/01/99	Category: AQUEOUS
	Detection	
Test Description	<u>Result Limit</u>	<u>Units Analyzed By</u>
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
	Detection	
Test_Description	<u>Result</u> <u>Limit</u>	<u>Units Analyzed By</u>
EPA 625 SEMI VOL. EXTRACT	-	- SD
EXTRACTION, EPA 608		- SD
Sample: 21A · OUTFALL 00G	02/01/99 Collected: 02/01/99	Category: AQUEOUS

Detection		
Test Description Result Limit Units	<u>Analyzed</u>	<u>By</u>
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	ŖJE
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

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11 East Main Street

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#### TEST RESULTS BY SAMPLE

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Page 7

•	Sample: 22A OUTFALL 00G	02/01/99 Collected: 02/01/99	Category: AQUEOUS
	Test Description SULFIDE, EPA 376.1	Detection Result Limit BDL 1 BDL 0.01	<u>Units Analyzed By</u> mg/L 03/05/99 LG mg/L 03/15/99 LG
•	TOTAL CYANIDE, EPA 335.2 Sample: 23A OUTFALL 00G	02/01/99 Collected: 02/01/99	- ,
	Test Description	Detection Result Limit	<u>Units Analyzed By</u>
	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
ر ن	<u>Test Description</u> CHLORINE, RESIDUAL TOTAL	<u>Detection</u> <u>Result Limit</u> BDL 0.05	<u>Units</u> <u>Analyzed</u> <u>By</u> mg/L 02/03/99 ML
	Sample: 25A OUTFALL 00G	02/01/99 Collected: 02/01/99	Category: AQUEOUS
	Test Description	<u>Detection</u> Result <u>Limit</u>	<u>Units Analyzed By</u>
	NITRATE-NITRITE N	0.50 0.2	mg/L 02/05/99 LG
	ORGANIC NITROGEN	BDL 0.5	mg/L 02/11/99 JB
		BDL 0.1	mg/L 02/18/99 LG
	PHOSPHORUS, EPA 365.1 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
		Detection	
		Result Limit	<u>Units Analyzed By</u>
	<u>Test Description</u> 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
		Detection Result Limit	Units <u>Analyzed By</u>
	Test Description		pCi/L 03/08/99 SF
	GROSS ALPHA, IN WATER		pCi/L 03/08/99 SF
	GROSS BETA, IN WATER	222	pCi/L 03/10/99 SF
	RADIUM, IN WATER	BDL 1	pCi/L 03/10/99 SF
Ur 🤞	RADIUM-226, IN WATER	BDL 1	berin 03/10/22 at

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## TEST RESULTS BY SAMPLE

Page 8

	Sample: 28A OUTFALL 00G	02/01/99 C	ollected: 02/01/99	Category:	AQUEOUS	
	Test Description	Result	Detection Limit	Units	Analyzed	By
	METHYLENE BLUE ACTIVE SUB.	BDL	· · · · · · · · · · · · · · · · · · ·		02/17/99	
	SULFATE, EPA 375.4	113		mg/L		
	SULFITE,	BDL	2	mg/L	02/17/99	ML
	Sample: 29A OUTFALL 00G	02/01/99 C	ollected: 02/01/99	Category:	AQUEOUS	
			Detection			
	Test Description	Result	Limit	<u>Units</u>	Analyzed	<u>By</u>
	ASBESTOS WATER	ND	0.2 MF	'/L, >10um	02/12/99	EM
	Sample: 31A OUTFALL 00C	02/01/99 C	ollected: 02/01/99	Category:	AQUEOUS	
			Detection			,
)	Test Description	Result	Limit	<u>Units</u>	<u>Analyzed</u>	<u>By</u> ≻
	5day CBOD, EPA 405.1	4	2	mg/L	02/08/99	·PT
	SUSPENDED SOLIDS, EPA 160.2	BDL	ı 5	mg/L	02/11/99	KC
	Sample: 32A OUTFALL 00C	02/01/99 C	collected: 02/01/99	Category:	AQUEOUS	
			Detection			
	Test_Description	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	By
	COD, EPA 410.4	BDL	4 5	mg/L	02/19/99	$\mathbf{L}\mathbf{G}$
	TOC, EPA 415.1	BDI	. 1	mg/L	02/09/99	WL
	Sample: 33A OUTFALL 00C	02/01/99 0	Collected: 02/01/99	Category:	AQUEOUS	
			Detection			
	Test Description	Result	<u>Limit</u>	Units	Analyzed	By
	AMMONIA N, EPA 350.2	BDI		mg/L	02/11/99	JB
			•	-		
	Sample: 35A OUTFALL 00C	02/01/99 0	Collected: 02/01/99	Category:	AQUEOUȘ	
			Detection			
	Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
~	EPA 625 SEMI VOL. EXTRACT		-	-		SD
	EXTRACTION, EPA 608	-	-	-		SD
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TEST RESULTS BY SAMPLE

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Sample: 36A OUTFALL 00C

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02/01/99 Collected: 02/01/99 Category: AQUEOUS

		Detection			
Test Description	Result	Limit	<u>Units</u>	<u>Analyzed</u>	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
21107		-			
Sample: 37A OUTFALL 00C	02/01/99 Col:	lected: 02/01/99	Category:	AQUEOUS	
		Detection			-
Test_Description	<u>Result</u>	Limit	<u>Units</u>	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 Col	lected: 02/01/99	Category	AQUEOUS	
۱.		Detection			_
Test Description	Result	<u>Limit</u>	<u>Units</u>	Analyzed	_
PHENOLICS, EPA 420.1	BDL	0.01	mg/L	02/23/99	JB

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#### TEST RESULTS BY SAMPLE

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	Sample: 39A OUTFALL OOC	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
			Detec	tion			
	Test Description	Result			Units	Analyzed	By
	CHLORINE, RESIDUAL TOTAL	BDI			mg/L	02/03/99	ML
				••		02/03/33	1-11-1
	Sample: 40A OUTFALL 00C	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
			Detec	tion			
	Test Description	Result	<u>Lim</u>	it	<u>Units</u>	<u>Analyzed</u>	By
	NITRATE-NITRITE N	BDI	ւ օ	.2	mg/L	02/05/99	LG
	ORGANIC NITROGEN	BDI	ն 0	.5	mg/L	02/11/99	JB
	PHOSPHORUS, EPA 365.1	BDI	ւ օ	.1	mg/L	02/18/99	LG
	TKN, EPA 351.3	BDI	L 0	.5	mg/L	02/06/99	JB
	Sample: 41A OUTFALL 00C	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
	·		<b>D</b> - 4				$\sim$
	Test Description	Decul	Detec			3	<b>n</b>
	Test Description	Result			Units		<u>By</u>
	OIL & GREASE, EPA 413.1	BD	L	5	mg/L	02/10/99	PT
	Sample: 42A OUTFALL 00C	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
			Detec	tion			
	<u>Test_Description</u>	Result		<u>it</u>	<u>Units</u>		<u>By</u>
	GROSS ALPHA, IN WATER	BD:	-	3	pCi/L		SF
	GROSS BETA, IN WATER	BD		4	pCi/L	-	SF
	RADIUM, IN WATER	BD		1	pCi/L		SF
	RADIUM-226, IN WATER	BD	Ĺ	1	pCi/L	03/10/99	SF
	Sample: 43A OUTFALL 00C	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
			Detec	tion.			
	Test Description	<u>Resul</u>	<u>t Lim</u>	it	<u>Units</u>	<u>Analyzed</u>	By
	METHYLENE BLUE ACTIVE SUB.	BD	L 0.	01	mg/L	02/17/99	ML
	SULFATE, EPA 375.4	BD	L	10	mg/L	02/18/99	JB
	SULFITE,	BD	L	2	mg/L	02/17/99	ML
	Sample: 44A OUTFALL 00C	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
	·		Detec				
	Test_Description	<u>Resul</u>				<u>Analyzed</u>	
À	ASBESTOS WATER	N	D 0	.2 ME	7/L, >10um	02/12/98	EN
y					·		-

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

TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 04A 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	
CHLORODIBROMOMETHANE	BDL	2
TETRACHLOROETHYLENE	BDL	
TOLUENE	BDL	
TRICHLOROETHENE	BDL	
VINYL CHLORIDE	BDL	10
XYLENES	BDL	10
SURROGATE %REC	COVERY	LIMITS
D4-1,2 DICHLOROETHANE	112	<u>    76  -    114</u>
D8-TOLUENE	94	88110

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#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 04A Method: 624 Category: AQUEOUS

Test Code: 624\_X

4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

<u>86</u> - <u>115</u>

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

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#### TEST RESULTS BY SAMPLE

Page 13

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

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Test Code: 625\_AE

PARAMETER	RESULT	LIMIT
2.4.6-TRICHLOROPHENDL	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-TRICHLOROBEZENE	BDL	10
HEXACHLOROBENZENE	BDL	10
HEXACHLOROETHANE	BDL	10
BIS (2-CHLOROETHYL)ETHER	BDL	10
2-CHLORONAPHTHALENE	BDL	10
1,2-DICHLOROBENZEE	BDL	10
1,3-DICHLOROBENZENE	BDL	10
1,4-DICHLOROBENZENE	BDL	10
3, 3-DICHLOROBENZIEINE	BDL	20
2,4-DINITROTOLUE	BDL	10
2,6-DINITROTOLUEDE	BDL	10
FLUORANTHENE	BDL	10
4-CHLOROPHENYL PHENYL ETHER	BDL	10
4-BROMOPHENYL PHEEYL ETHER	BDL	
BIS (2-CHLOROISOPELPYL) ETHER	BDL	
BIS (2-CHLOROETHOXY) METHANE	BDL	
HEXACHLOROBUTADIER	BDL	
HEXACHLOROCYCLOPETADIENE	BDL	
ISOPHORONE	BDL	
NAPHTHALENE	BDL	10
NITROBENZENE	BDL	
N-NITROSODIMETHYLEMINE	BDL	
N-NITROSODIPHENYLMINE	BDL	
N-NITROSODI-N-PROPLAMINE	BDL	
BIS (2-ETHYLHEXYL) THALATE	BDL	10

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#### TEST RESULTS BY SAMPLE

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Test Code: 625\_AE

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

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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	<b>%RECOVERY</b>	LIMITS	
	NITROBENZENE-d5	85	<u> </u>	114
	2-FLUOROBIPHENYL	72	43 -	116
	p-TERPHENYL-d14	95	<u> </u>	141
	PHENOL-d6	46	<u>    10</u> -	94
•	2-FLUOROPHENOL	74		100
	2,4,6-TRIBROMOPHENOL	50	<u>    10</u> -	123

Notes and Definitions for this Report:

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

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#### TEST RESULTS BY SAMPLE

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Sample Description:	OUTFALL 001	02/01/99	Lab No:				
Test Description:	PCB/PESTICIDES	EPA 608	Method:		Test (	Code:	608
Collected:		C	ategory:	AQUEOUS			

PARAMETER	RESULT	LIMIT
PARAMETER ALDRIN ALPHA-BHC BETA-BHC DELTA-BHC GAMMA-BHC CHLORDANE 4,4-DDT 4,4-DDT 4,4-DDD DIELDRIN ALPHA ENDOSULFAN BETA ENDOSULFAN BETA ENDOSULFAN ENDOSULFAN SULFATE ENDRIN ENDRIN ALDEHYDE HEPTACHLOR HEPTACHLOR HEPTACHLOR PCB-1016 PCB-1221	BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL	$\begin{array}{c} 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.020\\ 0.030\\ 0.10\\ 0.10\\ 0.10\\ 0.20\\ \end{array}$
PCB-1232	BDL	0.10
PCB-1242	BDL BDI	0.10
PCB-1248	BDL BDL	0.10
PCB-1254	BDL	0.10
PCB-1260		0.20
TOXAPHENE	<u> </u>	0.20

	SURROGATE	<b>%RECOVERY</b>	LIMITS	
DBC (SURROGATE,		<u>90</u> .	<u> </u>	130
2,4,5,6-TCX (SURRO		93	<u> </u>	130

Notes and Definitions for this Report:

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

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#### TEST RESULTS BY SAMPLE

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Sample Description:OUTFALL 00102/01/99Lab No:05ATest Description:PCB/PESTICIDES EPA 608Method:608Collected:02/01/99Category:AQUEOUS

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Test Code: 608

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>



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TEST RESULTS BY SAMPLE

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

PARAMETER		RESULT	LIMIT	
TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE		BDL BDL		5
SURROGATE	%RECOVI	ERY	LIMITS	
NITROBENZENE-D5	6	5	35 -	114
2-FLUOROBIPHENYL	7	8	43 -	116
p-TERPHENYL-d14	11	3	<u> </u>	<u>   141</u>
PHENOL-d6	2	5	10 -	94
2-FLUOROPHENOL	3	0	21 -	100

2-FLUOROPHENOL

2,4,6-TRIBROMOPHENOL

Notes and Definitions for this Report:

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123

EXTRACTED 0	<u>2/08/99</u>
DATE RUN 02	/11/99
ANALYST JAT	•
INSTRUMENT	SATURN
FILE ID	0206501W
UNITS uq/I	!
METHOD	8270
BDL BELOW	DETECTION LIMIT

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#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 00G Test Description: EPA 624 Collected: 02/01/99

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PARAMETER

02/01/99 Lab No: 19A Method: 624 Category: AQUEOUS

RESULT

LIMIT

Test Code: 624\_X

#### ACROLEIN BDL 20 20 ACRYLONITRILE BDL 2-CHLOROETHYLVINYL ETHER BDL 20 2 BDL BENZENE 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 1,1,2,2-TETRACHLOROETHANE BDL 2 10 CHLOROETHANE BDL 2 CHLOROFORM BDL 2 1,1-DICHLOROETHYLENE BDL 2 BDL 1,2-TRANS-DICHLOROETHYLENE 1,2-DICHLOROPROPANE BDL 2 BDL 2 CIS-1, 3-DICHLOROPROPYLENE 2 TRANS-1, 3-DICHLOROPROPYLENE BDL 2 ETHYLBENZENE BDL 2 BDL 1,2-DICHLOROBENZENE 2 1,3-DICHLOROBENZENE BDL 1,4-DICHLOROBENZENE BDL 2 10 METHYLENE CHLORIDE BDL CHLOROMETHANE BDL 10 BDL 2 BROMOMETHANE 2 BDL BROMOFORM 2 DICHLOROBROMOMETHANE BDL 2 BDL TRICHLOROFLUOROMETHANE 2 BDL CHLORODIBROMOMETHANE BDL 2 TETRACHLOROETHYLENE TOLUENE BDL 2 TRICHLOROETHENE BDL 2 BDL 10 VINYL CHLORIDE 10 XYLENES BDL LIMITS SURROGATE **%RECOVERY** 76 D4-1,2 DICHLOROETHANE 113 88 **D8-TOLUENE** 92

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TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 19A Method: 624 Category: AQUEOUS

Test Code: 624\_X

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4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

<u>86</u> - <u>115</u>

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

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#### TEST RESULTS BY SAMPLE

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

Test Code: 625\_AE

Paga 20

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	<u>    10</u>
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

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## TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 00G 02/01 Test Description: EPA 625 SEMI WOLATILES Collected: 02/01/99

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02/01/99 Lab No: 20A TILES Method: 625 Category: AQUEOUS

Test Code: 625\_AE

SURROGATE	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-25	64	<u> </u>	114
2-FLUOROBIPHEML	65 .	43 -	116
	77	33 -	141
p-TERPHENYL-d14	35	10 -	94
PHENOL-25	33	21 -	100
2-FLUOROPHENIL	33	10 -	123
2,4,6-TRIBROMOPHENI	65		

Notes and Definitions for this Report:

- •
EXTRACTED 02/07/99
DATE RUN 02/25/99
ANALYST TC
INSTRUMENT <u>GC/MS</u>
FILE ID <u>S9022525</u>
UNITS <u>uq/L</u>
METHOD EPA 625
BDL BELOW DETECTION LIMIT

Committed to Quality Since 1958

Dayton, Ohio 45426



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PARAMETER

#### TEST RESULTS BY SAMPLE

RESULT

LIMIT

Page 22

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

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

SURRO	GATE %REC	COVERY L	IMITS	
DBC(SURROGATE, % RECO	VERY)	<u> </u>	<u>70</u> -	130
2,4,5,6-TCX(SURROGATE %	REC.)	94	<u>70</u> -	130

#### Notes and Definitions for this Report:

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

(937) 837-3744



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#### TEST RESULTS BY SAMPLE

Page 23

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

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Test Code: 608

METHOD EPA 608 BDL BELOW DETECTION LIMIT

Committed to Quality Since 1958



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PARAMETER

### 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

TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE	ESTER	BDL 5 BDL 5
SURROGATE	<b>%RECOVERY</b>	LIMITS
NITROBENZENE-D5	60	<u> </u>
2-FLUOROBIPHENYL	78	<u>    43</u> - <u>   116</u>
p-TERPHENYL-d14	115	<u>    33        141</u>
PHENOL-d6	28	<u>    10  -    94</u>
2-FLUOROPHENOL	35	<u>    21  -    100</u>
2,4,6-TRIBROMOPHENOL	85	<u>    10  -    123</u>

Notes and Definitions for this Report:

RESULT

LIMIT

EXTRACTED <u>02/08/99</u>
DATE RUN <u>02/11/99</u>
ANALYST <u>JAT</u>
INSTRUMENT <u>SATURN</u>
FILE ID0206504W
UNITS <u>ug/L</u>
METHOD 8270
BDL BELOW DETECTION LIMIT

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Davton. Ohio 45426

Page 24



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### TEST RESULTS BY SAMPLE

Page 25

Sample Description: OUTFALL 00C Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 34A Method: 624 Category: AQUEOUS

Test Code: 624\_X

PARAMETER	RESULT	LIMIT	
	BDL	20	
ACROLEIN	BDL	20	
ACRYLONITRILE	BDL	20	
2-CHLOROETHYLVINYL ETHER	BDL	2	
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	10	
CHLOROETHANE	BDL	2	
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		
1,4-DICHLOROBENZENE	BDL BDL		
METHYLENE CHLORIDE	BDL		
CHLOROMETHANE	BDL	2	
BROMOMETHANE	BDL		
BROMOFORM	BDL		
DICHLOROBROMOMETHANE	BDL		
TRICHLOROFLUOROMETHANE	BDL		
CHLORODIBROMOMETHANE	BDL		
TETRACHLOROETHYLENE	······································		
TOLUENE	BDL		
TRICHLOROETHENE	BDL		
VINYL CHLORIDE	BDL		
XYLENES	BDL	10	
SURROGATE &RE	COVERY	LIMITS	
D4-1,2 DICHLOROETHANE	114		14
D8-TOLUENE	94	<u>    88</u> - <u>   1</u>	10

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#### TEST RESULTS BY SAMPLE

Page 26

Sample Description: OUTFALL 00C Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 34A Method: 624 Category: AQUEOUS

Test Code: 624\_X

4-BROMOFLUOROBENZENE <u>93</u> <u>86</u> - <u>115</u>

Notes and Definitions for this Report:

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

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Order # 99-02-060

03/16/99 09:22

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TEST RESULTS BY SAMPLE

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Page 27

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

2

Test Code: 625\_AE

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	
NITROBENZENE	BDL	
N-NITROSODIMETHYLAMINE	BDL	
N-NITROSODI PHENYLAMINE	BDL	
N-NITROSODI-N-PROPYLAMINE	BDL	
BIS (2-ETHYLHEXYL) PHTHALATE	BDL	10

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Dayton, Ohio 45426

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### TEST RESULTS BY SAMPLE

Page 28

Sample Description:OUTFALL 00C02/01/99Lab No: 35ATest Description:EPA 625SEMI VOLATILESMethod: 625Collected:02/01/99Category: AQUEOUS

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Test Code: 625\_AE

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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	<u> </u>	<u> </u>	114
2-FLUOROBIPHENYL	<u> </u>	<u> </u>	116
p-TERPHENYL-d14	82	<u> </u>	141
PHENOL-d6	62	<u>    10</u> -	94
2-FLUOROPHENOL	71	<u> </u>	100
2,4,6-TRIBROMOPHENOL	66	10 -	123

Notes and Definitions for this Report:

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

(937) 837-3744



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Test Code: 608

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

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TEST RESULTS BY SAMPLE

02/01/99 Lab No: 35A

Method: 608

Category: AQUEOUS

Sample Description: OUTFALL 00C 02/01/3 Test Description: PCB/PESTICIDES EPA 608 Collected: 02/01/99

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PARAMETER		RESULT	LIMIT
PARAMETER ALDRIN ALPHA-BHC BETA-BHC DELTA-BHC GAMMA-BHC CHLORDANE 4,4-DDT 4,4-DDD DIELDRIN ALPHA ENDOSULFAN BETA ENDOSULFAN ENDOSULFAN SULFATE ENDRIN ENDRIN ALDEHYDE HEPTACHLOR HEPTACHLOR HEPTACHLOR BETA-1016 PCB-1212 PCB-1242 PCB-1248 PCB-1254 PCB-1260		RESULT BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL	$\begin{array}{c} 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.0\\ 0.$
TOXAPHENE	CIEROGATE	BDL %RECOVE	

	SURROGATE	*RECOVERI	TT 1.1 T
DEC (SURROGATE,		93	<u>70</u>
DBC (SURROGATE,		92	70
2,4,5,6-TCX (SURRO	GATE & REC.)		

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

(937) 837-3744

130

130



#### TEST RESULTS BY SAMPLE

Page 30

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

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Test Code: 608

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

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

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2,4,6-TRIBROMOPHENOL

### TEST RESULTS BY SAMPLE

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

PARAMETER		RESULT	LIMIT
TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE		BDL BDL	<u>5</u> 5
SURROGATE NITROBENZENE-D5 2-FLUOROBIPHENYL p-TERPHENYL-d14 PHENOL-d6 2-FLUOROPHENOL	2	<u>3</u> 0 <u>0</u> 5 8	LIMITS 35 - 114 43 - 116 33 - 141 10 - 94 21 - 100 10 - 123

Notes and Definitions for this Report:

EXTRACTED 0	2/08/99
DATE RUN 02	/11/99
ANALYST JAT	
INSTRUMENT	SATURN
FILE ID	0206503W
UNITS <u>uq/I</u>	2
METHOD	8270
BDL BELOW	DETECTION LIMIT

(937) 837-3744

	PDES Permit number: VII0005827	Outfall Number: 00C	
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### 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:

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

<u>Ethanolamine</u> was detected in Outfall 00C (Plant Heating Boiler Blowdown). Based on knowledge of the plant processes, there <u>is</u> 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 MI0005827	OUTFALL NUMBER 00C
9 WATER TREATMENT ADDITIVES Water treatment additives include any material that is added to wa treat the water.		rated by the facility to condition or
Approvals of water treatment additives are authorized by the DEC constitute approval of the water treatment additives that are include	Q under separate correspondence. The issuar ed in this application	ice of an NPDES permit does not
A. Are there water treatment additives in the discharge from this fa	acility?	
No, proceed to item 4.		
Yes		
B. Have these water treatment additives been previously approve	d?	
No, continue with C. below.		
Yes Submit a list of the previously approved water treatment updated if it has changed since the previous approval	additives and the date they were approved. Th	e information listed in C 1-8 must be
C. Submit a list of water treatment additives that are or may be dia additive	scharged from the facility Applicants must subr	nit the information listed below for each
1 The water treatment additive Material Safety Data Sheet.		
2. The proposed water treatment additive discharge concentration	on.	
3 The discharge frequency (i e , number of hours per day, wee	k, etc ).	
4 The outfall the water treatment additive is to be discharged fr		
5 The type of removal treatment, if any, that the water treatment		
6. The water treatment additive function (i.e., microbiocide, floc		
7. A 48-hour LC50 or EC50 for a North American freshwater pla	anktonic crustacean (either Ceriodaphnia sp., Da	aphnia sp , or Simocephalus sp )
8 The results of a toxicity test for one other North American fre requirement of Rule 323 1057(2)(a) of the Water Quality Star a rainbow trout, bluegill, or fathead minnow	shwater aquatic species (other than a planktonic ndards Examples of tests that would meet this r	crustacean) that meets a minimum equirement include a 96-hour LC50 for
The required toxicity information (described in items 7 and 8 abo on the DEQ's Internet page http://www.deq state.mi.us/swq/g additives on this list, only the information in items 1 through 6 abo	gleas/docs/wta/WTAlist.doc. If you intend to	the water treatment additives listed o use one of the water treatment
Note: The availability of toxicity information for a water treatment		ge the water treatment additive.
10. WHOLE EFFLUENT TOXICITY TESTS	-	
Have any acute or chronic WET tests been conducted on any dis If yes, identify the tests and summarize the results below unless t	charges or receiving water in relation to facility of the test has been submitted to the department in	lischarges within the last three years? the last 5 years
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### 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	
Donald C. Cook Nuclear Plant	MI0005827	Outfall Number 00C
	1110003827	
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	5/23/00 NPDES Permit approval 9/28/95	
Betz Cortrol OS5035, (Formerly Betz Powerline 1205), Betz Cortrol OS5010, Nalco 19H		
Carbohydrazide Solution such as:	3/25/94 application, 4/15/94 approval, NPDES	S Permit approval 9/28/95
Nalco 1250 plus, Nalco Eliminox		
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# Section III.B Outfall 00G

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### Michigan Department of Environmental Quality-Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION SECTION III - Industrial and Commercial Wastewater

				Outfall Info			L	
UI	the ap	plication for additional o	Outfall Information (pa utfalls as necessary.	ges 26-31) f	or each outfai	ll at the facility. Mal	ke copies of this bla	nk section
_				NF	DES PERMIT	NUMBER	OUTFALL	NUMBER
10		Donald C Cook N	luclear Plant	1	0005827		- · 00G -	-
1	OUT	FALL INFORMATION (see g	page 25 for instruction on com	pletion of this	page)			
		Watershed	<u></u> _					
	Α.	Lower St. Joseph						
	Ð	Receiving Water						
	D	Lake Michigan			1			
	he application for ASE TYPE OR PF CILITY NAME DOUTFALL INFOR A. Watershed Lower St B Receiving Lake Mich C Ounty Berrien J. ¼, ¼ SW E. Latitude 41 58' 30" /F. Type of War Contact Noncond Storm w				Township Lake			
	-		1/	Section	Lake	Town	Range	
	D.		1¼ NW	06		065	19W	
					Longitude			
	E.				86 34' 30"			]
		4100 00						
	′ <b>F</b> .	Type of Wastewater Discha	rged (Check all that apply to	this outfall)				
		Contact Cooling	Sanıtary Wastev	water	Ground	dwater Cleanup	Storm Water	(regulated)
		Noncontact Cooling	Process Wastew	vater	Hydros	static Pressure Test	Storm Water	(not regulated)
		Storm water subject to e	effluent guidelines (indicate u	nder which cal	tegory)			
		Other - specify (see "Ta	able 8 - Other Common Types	of Wastewate	er" in appendix)	~		
ļ	J.	What is the maximum Facil	ity 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	
Continuous Discharge How often is there a discharge from		<u>24</u> Hours/Day <u>365</u> Days/Year	
-	he following additional information information in the second s	tion:	
How often is there a discharge from Batch dischargers must provide t	he following additional information information in the second s	<u></u>	
How often is there a discharge from Batch dischargers must provide the state of the	he following additional information information in the second s	tion:	Maximum
How often is there a discharge from Batch dischargers must provide the state of the	he following addıtıonal informa Yes INO Number	of batches discharged per day	Maximum

## Michigan Department of Environmental Quality- Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

	SASE TYPE OR PRINT		-
	CILITY NAME Donald C. Cook Nuclear Plant	NPDES PERMIT NUMBER MI0005827	
2.	PROCESS STREAMS CONTRIBUTING TO OUTFALL DIST This information is used to determine the applicable federal the type of facility. Page 7 of the appendix contains an ab application. For assistance call the Permits Section. All inc process. If the wastestream is not regulated under federal of potential to be present in the discharge. To submit additional	CHARGE I regulations for this discharge. The information requision obreviated list of various industries and the types of idustries shall provide the name of each process and categonical standards, the applicant shall report all p	Information each shall report in this d the SIC or the NAICS code for the
	PROCESS INFORMATION A. Name of the process contributing to the discharge: <u>Rev</u>	rerse Osmosis system reject	
	<ul> <li>B. SIC or NAICS code. <u>4911</u></li> <li>C Describe the process and provide measures of production osmosis system reject flow 0 366 MGD maximum flow, 2</li> </ul>	on (see the instructions to determine the appropriate 2247 MWE total plant electrical generation.	e information to be reported) Reverse
	PROCESS INFORMATION <ul> <li>A. Name of the process contributing to the discharge</li></ul>		e 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		e 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		e 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		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<sub>5</sub>, 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 81/2" 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.  $\mu g/l = micrograms$  per liter, mg/l = milligrams per liter,  $^{\circ}F =$  degrees Fahrenheit,  $^{\circ}C =$  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<sub>5</sub>, 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<sub>5</sub>, 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	B. Outfall I				
ACILITY NAME Donald C. Cook Nuclear Plant		NPDES PERMIT N MI0005827	UMBER	OUTFAI 00G	
3. WASTEWATER CHARACTERISTICS - CONVENTIO			mpleting this page a		
Check this box if additional information is included					,-
Parameter	Maximum Daily Concentration	Maximum Monthly Concentration	Units	Number of Analyses	Sample Type
Biochemical Oxygen Demand - five day (BOD₅)	4	4	mg/l	2	Grab
COD (Chemical oxygen demand)	8	8	mg/l	2	Grab
TOC (Total organic carbon)	3	3	mg/l	2	Grab
Ammonia Nitrogen (as N)	<0.5	<0 5	mg/l	2	Grab
Total Suspended Solids	2	<4	mg/l	102	Grab
Total Dissolved Solids	NA	NA	mg/l	NA	Grab
Total Phosphorus (as P)	<0 1	<0.1	mg/l	1	Grab
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
Temperature, Summer	76 6	76 6	⊠°F ⊡°C	4	Grab
Temperature, Winter	44 2	44.2	⊠℉⊡℃	2	Grab
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
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					Grab 24 Hr Comp

### Michigan Department of Environmental Quality-Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION SECTION III - Industrial and Commercial Wastewater

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B. Outfall Information

Έ	ASE TYPE OR PRINT		
, .c	ILITY NAME Donald C Cook Nuclear Plant	NPDES PERMIT NUMBER MI0005827	OUTFALL NUMBER 00G
4	PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION Existing primary industries that discharge process wastewater must sub- identified in Table 2 (as determined from Table 1, <u>Testing Requirement</u> identified in Table 3 Existing primary industries must also provide the r 2 known or believed to be present in facility effluent	s for Organic Toxic Pollutants by Industrial Catego	ry), and all the pollutants
	In addition, submit the results of all other effluent analyses performed wi New primary industries that propose to discharge process wastewater		
	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-thchlorophenoxy ace TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon); trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has rea facility effluent, must submit the results of at least one effluent analysis dioxin and furan congeners must be conducted using EPA Method 1613	0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorot son to believe that 2,3,7,8-Tetrachlorodibenzo-p-dic for the dioxin and furan congeners listed in Table 6	nionate (Ronnel), 2,4,5- oxin (TCDD) is present in
	In addition, submit the results of all other effluent analyses performed w	nthin the last 5 years for any dioxin and furan conge	ner listed in Table 6
	New industries that expect to use or manufacture 2,3,5-trichloropheno 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbo trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has rea facility effluent must provide estimated effluent concentrations for the direct	n), 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphoro son to believe that 2,3,7,8-Tetrachlorodibenzo-p-di	othionate (Ronnel); 2,4,5-
_ 1	OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION Existing secondary industries, or existing primary industries that discha analysis for any chemical listed in Tables 2 and 3 known or believed to 1	rge non-process wastewater, must submit the resu be present in facility effluent	Its of at least one effluent
	In addition, submit the results of all other effluent analyses performed w	thin the last 5 years for any chemical listed in Table	es 2 and 3.
	New secondary industries, or new primary industries that propose t concentration for any chemical listed in Tables 2 and 3 expected to be p	o discharge non-process wastewater, must provi present in facility effluent	de an estimated effluent
7.	ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION		•
	All existing industries, regardless of discharge type, must provide the believed to be present in facility effluent, and a measured or estimated be present in facility effluent. In addition, submit the results of any e Tables 4 and 5.	effluent concentration for any chemical listed in Tat	ble 5 known or believed to
	New industnes, regardless of discharge type, must provide an estimate be in facility effluent	d effluent concentration for any chemical listed in T	ables 4 and 5 expected to
8.	INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED		
	New or existing industries, regardless of discharge type, must provide injurious chemicals known or believed to be present in facility efflue effluent data that are less than 5 years old for these chemicals must be	int that have not been previously identified in this	for any toxic or otherwise s application Quantitative
	NOTE: All effluent data submitted in response to questions 4, 5, 6, 7, a see page ii, item 8 If the effluent concentrations are estimated, pl completed for each data row Parameter, CAS No, Concentration(s) See page II, number 5 for analytical test requirements.	ace an E in the "Analytical Method" column The	e following fields must be

### Michigan Department of En imental Quality- Water Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR P	PRINT													1. 1	`	٦, ١
FACILITY NAME					N	PDES PERMI	T NUMBER	}	ľ	OUTFALL N	UMBER			, • <sup>1</sup>		٦
Donald C. Cook Nucl	ear Plant					10005827				00G				. 1	مد ا	.
	E DATE 🗲													ية لورجي عن المعالم من قرام " مدتور" - يكور " و مير		1.1
PARAMETER	CAS	, Conc. ₌ (ug/l)	Conc. (ug/l)	(ug/l)	Conc. (ug/l)	Conc. //	Conc. (ug/l)	ັ Conc. ້ (ug/i) ້	~.Conc. <u>}</u> - ື (ug/l) ີ	Conc.; ) (ug/l)	/* Conc< ↓∴ (ug/l) *⁄	Sample Type	Analytic Seal at the	CL	The Mar The State	1
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						_			 						 	_
See Attached															-	
for additional																; ;
data.																ţ
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### Section III.B.6 and 7

### Additional Sample Data Summary Sheet

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For Outfall 00G	2/1/99	- 3/21/02	5/30/02	Sample type	Max Daily	Analytical Method	Max monthly	# of Analyses
Parameter Table 2			84.7 <i>9</i> 57		ETTARLES	FAR2-2444	H, Les Jans	法装装的第一个人
See Attached data set from Be		and the second	<u>, , , , , , , , , , , , , , , , , , , </u>					
Table 3 Analysis	ATT. YERRADAS	Service States	r.Gateric	The states	ti that	13.1. CX 62.31	A. P. C.	e-azisag2557
	<1	<1	-	Grab	<1	204 2/200.7	<1	2
Antimony (ug/l)	<1	2	<1	Grab	2	206.2/200.7	2	3
Arsenic (ug/l)	<1	<0.2	-	Grab	<1	200 7	<1	2
Beryllium (ug/l)	<0.2	<0.2	•	Grab	<0.2	213 2/200 7	<0 2	2
Cadmium (ug/l)	<10	<2		Grab	<10	200 7	<10	2
Chromium (ug/l)	<1	1	1	Grab	1	220 2/200 7	1	3
Copper (ug/l)	<1	<1		Grab	<1	239 2/200.7	<1	2
Lead (ug/l)	<5	<3		Grab	<5	249 2/200.7	<5	2
Nickel (ug/l)	<0.01			Grab	<0.01	420 1	<0.01	1
Total Phenols (ug/l)		<1	<u> </u>	Grab	<1	270 3	<1	1
Selenium (ug/l)				Grab	<0.5	272 2/200.7	<0.5	2
Silver(ug/l)	<0 5	<0.2	<u> </u>	Grab	<1	279.2	<1	2
Thallium -(ug/l)	<1	<1			<1	200.7	<4	1
Zinc (ug/l)	-	<4		Grab	<0 01	335.2	<0.01	2
Cyanide (mg/l)	<0.01	<0.01		Grab		1631	2 08	2
Mercury (ng/l)	-	1 51	2 08	Grab	2.08			
Table 4 design of the second	gentioners (Paper Density Pr	Bargerster	SHE MADE &	LE WELLE	HILF FRONT			2
Chlorine, total residual (mg/l)	<0 08	0 21		Grab	0 21	330 5	0.21	3
Sulfate (mg/l)	113	174	234	Composite	234	375.4	234	
Additional Data From Belmor	te Park Laboratories	is attached.						the second state of second second
Table 5	THE FRANK	行政部分理想会	ans and the	Marter Dalland	<u> 1569690</u>	1 ALEN - 87	1 4442 MAL	7,8946286
See Attached data set from B	elmonte Park Laborat	ories.		<u> </u>		1	J	<u> </u>

<sup>•</sup> 00G

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Belmonte Park Environmental Laboratories

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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		Sample		Sample		Sample	
	Number	De	scription		Number	De	scription	
	.01	OUTFALL	001	02/01/99	24	OUTFALL	00G	02/01/99
	02	OUTFALL	001	02/01/99	25	OUTFALL	00G	02/01/99
	03	OUTFALL	001	02/01/99	26	OUTFALL	00G	02/01/99
•	04	OUTFALL	001	02/01/99	27	OUTFALL	00G	02/01/99
	05	OUTFALL	001	02/01/99	28	OUTFALL	00G	02/01/99
	06	OUTFALL	001	02/01/99	29	OUTFALL	00G	02/01/99
	07	OUTFALL	001	02/01/99	30	OUTFALL	00G	02/01/99
	08	OUTFALL	001	02/01/99	31	OUTFALL	00C	02/01/99
	09	OUTFALL	001	02/01/99	32	OUTFALL	00C	02/01/99
	10	OUTFALL	001	02/01/99	33	OUTFALL	00C	02/01/99
	11	OUTFALL	001	02/01/99	34	OUTFALL	000	02/01/99
	12	OUTFALL	001	02/01/99	35	OUTFALL	000	02/01/99
	13	OUTFALL	001	02/01/99	36	OUTFALL	00C	02/01/99-
	14	OUTFALL	001	02/01/99	37	OUTFALL	00C	02/01/99
	15	OUTFALL	001	02/01/99	38	OUTFALL	00C	02/01/99
	16	OUTFALL	00G	02/01/99	39	OUTFALL	00C	02/01/99
	17	OUTFALL	00G	02/01/99	40	OUTFALL	00C	02/01/99
	18	OUTFALL	00G	02/01/99	41	OUTFALL	00C	02/01/99
	19	OUTFALL	00G	02/01/99	42	OUTFALL	00C	02/01/99
	20	OUTFALL	00G	02/01/99	43	OUTFALL	00C	02/01/99
	21	OUTFALL	00G	02/01/99	44	OUTFALL	00C	02/01/99
	22	OUTFALL	00G	02/01/99	45	OUTFALL	00C	02/01/99
	23	OUTFALL	00G	02/01/99				



Belmonte Park Environmental Laboratories

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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".

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Page 2

Certified By MATT LAKE

Committed to Quality Since 1958 Dayton, Ohio 45426



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

### TEST RESULTS BY SAMPLE

Page 3

			00/01/00	<b>G</b> -11	00/01/00	<b>O</b> - h	100000	
	Sample: 01A	OUTFALL 001	02/01/99	Collected	: 02/01/99	Category:	AQUEOUS	
				Dete	ction			
	Test Descript	ion	Resu			Units	Analyzed	By
	5day CBOD,	EPA 405.1		3	2	mg/L	02/08/99	PT
	SUSPENDED SOL	IDS,EPA 160.2	В	DL	5	mg/L	02/11/99	KC
	Sample: 02A	OUTFALL 001	02/01/99	Collected	: 02/01/99	Category:	AQUEOUS	
				Dete	ction			
	Test Descript		Resu		<u>nit</u>	Units	<u>Analyzed</u>	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	WL
	Sample: 03A	OUTFALL 001	02/01/99	Collected	: 02/01/99	Category:	AQUEOUS	
•				Dete	<u>ction</u>			
)	<u>Test Descript</u>	<u>ion</u>	Resu	<u>lt Lin</u>	nit	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
	AMMONIA N,	EPA 350.2	В	DL	).5	mg/L	02/11/99	JB
	Sample: 05A	OUTFALL 001	02/01/99	Collected	: 02/01/99	Category:	AQUEOUS	
				Dete	ction			
	<u>Test Descript</u>	ion	Resu	<u>lt Li</u> t	<u>nit</u>	<u>Units</u>	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	
				Dete	ction			
	<u>Test Descript</u>	ion	Resu	<u>lt Li</u>	<u>nit</u>	<u>Units</u>	<u>Analyzed</u>	By
	ALUMINUM,	EPA 200.7	0.		.05	mg/L	02/12/99	RJE
	ANTIMONY,	EPA 204.2			001	mg/L	03/05/99	RJE
	ARSENIC,	EPA 206.2			001	mg/L	03/05/99	RJE
	BARIUM,	EPA 200.7	0.0		005	_	02/11/99	RJE
	BERYLLIUM,	EPA 200.7			001	mg/L		RJE
	BORON,	EPA 200.7			.05	mg/L	02/12/99	RJE
	CADMIUM,	EPA 213.2		DL 0.0			03/08/99	
	CHROMIUM,	EPA 200.7			.01	mg/L	02/11/99	RJE
	COBALT, COPPER,	EPA 200.7			.01	mg/L	02/11/99	RJE
	IRON,	EPA 220.2			001	mg/L	03/08/99	RJE
	LEAD,	EPA 200.7			0.1	mg/L	02/11/99	RJE
	LITHIUM,	EPA 239.2 EPA 200.7			001 .01	mg/L	03/05/99	RJE
		DFA 200./	0.	<u> </u>		mg/L•	02/12/99	RJE



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

TEST RESULTS BY SAMPLE

Page 4

<u>Test Descripti</u>	- On	Result	Detection Limit	Units	Analyzed	By
MAGNESIUM,	EPA 200.7	11	1	mg/L	02/12/99	RJE
MAGNESION, MANGANESE,	EPA 200.7	BDL	0.01	mg/L	02/11/99	RJE
	EPA 245.1	BDL	0.0002	mg/L	02/11/99	RĴE
MERCURY,				-		EP
METALS DIGESTI	EPA 200.7	BDL	0.01	mg/L	02/11/99	RJE
MOLYBDENUM,	EPA 249.2	BDL	0.005	mg/L	03/08/99	RJE
NICKEL,	EPA 249.2 EPA 200.7	BDL	0.1	mg/L		RJE
SELENIUM,		BDL	0.0005	mg/L	03/08/99	RJE
SILVER,	EPA 272.2	0.12	0.01	mg/L	02/12/99	RJE
STRONTIUM,	EPA 200.7	BDL	0.001	mg/L	03/05/99	RJE
THALLIUM,	EPA 279.2		0.1	mg/L	02/15/99	RJE
URANIUM	EPA 200.7	BDL			02/11/99	RJE
ZINC,	EPA 200.7	BDL	0.02	mg/L	02/11/99	RUE
Sample: 07A	OUTFALL 001	02/01/99 Coll	Lected: 02/01/9	9 Category:	AQUEOUS	•
•			Detection		•	
Test Descript:	ion	Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	By
SULFIDE,	EPA 376.1	BDL	1	- mg/L	03/05/99	$\mathbf{LG}$
TOTAL CYANIDE		BDL	0.01	mg/L	03/04/99	LG

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

	Detection			
<u>Result</u>	Limit		Analyzed	
BDL	0.01	шд\л	02/23/99	чъ

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

		Detection			
Test Description	Result	Limit		Analyzed	
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

		·	Detection			
Test Descripti		Result	Limit		<u>Analyzed</u>	
NITRATE-NITRIT		0.38	0.2	mg/L	02/05/99	$\mathbf{LG}$
ORGANIC NITROG		BDL	0.5	mg/L	02/11/99	JB
	EPA 365.1	0.37	0.1	mg/L	02/18/99	$\mathbf{LG}$
PHOSPHORUS,		BDL	0.5	mg/L	02/06/99	JB
TKN,	EPA 351.3	вра	010		•	

Test Description

PHENOLICS, EPA 420.1



		4					
: Order # 99-02-060						Page 5	
03/16/99 09:		TEST RES	ULTS BY SAMI	<u>PLE</u>			
Sample: 11A	OUTFALL 001	02/01/99	Collected:	02/01/99 Cat	egory:	AQUEOUS	
•					-31.		
			Detect	ion			
<u>Test Descrip</u>		Resu	<u>lt Lim</u>	<u>it</u>	<u>Units</u>	<u>Analyzed</u>	By
OIL & GREASE	E, EPA 413.1	B	DL	5	mg/L	02/10/99	PT
Sample: 12A	OUTFALL 001	02/01/99	Collected:	02/01/99 Cat	egory:	AQUEOUS	
			Detect				
Test Descrip		Resu			<u>Units</u>		
GROSS ALPHA, GROSS BETA,	IN WATER IN WATER	_	DL DL		pCi/L	• •	SF
RADIUM,	IN WATER		DL		pCi/L	03/08/99 03/10/99	
RADIUM-226,	IN WATER		DL			03/10/99	
Sample: 13A	OUTFALL 001	02/01/99	Collected:	02/01/99 Cat	.egory:	AQUEOUS	
			Detect	ion			
Test Descrip	otion	Resu			Units	Analyzed	By
METHYLENE BI	JUE ACTIVE SUB.	B	DL 0.0		mg/L		
SULFATE,	EPA 375.4	B	DL :	10	mg/L	02/18/99	JB
SULFITE,		В	DL	2	mg/L	02/17/99	ML
Sample: 14A	OUTFALL 001	02/01/99	Collected:	02/01/99 Cat	egory:	AQUEOUS	
			Detect				
Test Descrip		Resu			<u>Units</u>		<u>By</u>
ASBESTOS WAT	ſER		ND 0	.2 MF/L,	>10um	02/12/99	EM
Sample: 16A	OUTFALL 00G	02/01/99	Collected:	02/01/99 Cat	egory:	AQUEOUS	
			Detect				
Test Descrip		Resu			<u>Units</u>		<u>By</u>
5day CBOD,	EPA 405.1	_	4	2	mg/L		
SUSPENDED SC	DLIDS,EPA 160.2	В	DL	5	mg/L	02/11/99	KC
Sample: 17A	OUTFALL 00G	02/01/99	Collected:	02/01/99 Cat	egory:	AQUEOUS	
			Detec		•		
<u>Test Descrip</u>		Resu				Analyzed	By
200							
COD, TOC,	EPA 410.4 EPA 415.1		DL .1	5 1	mg/L mg/L	02/19/99 02/09/99	

11 East Main Street

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### TEST RESULTS BY SAMPLE

Page 6

Sample: 18A OUTFALL 00G

02/01/99 Collected: 02/01/99 Category: AQUEOUS

			Detection		
Test Description AMMONIA N,	EPA 350.2	<u>Result</u> BDL	Limit 0.5	<u>Analyzed</u> 02/11/99	

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

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			Detection			
Test Description		Result	Limit	<u>Units</u>	<u>Analyzed</u>	By
EPA 625 SEMI VOL. EX	TRACT			-		SD
	IPA 608	-		-		SD

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

					Detection	<u>n</u>		
,	Test Description			<u>Result</u>	<u>Limit</u>	<u>Units</u>	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,		206.2	BDL	0.001	mg/L	03/05/99	RJE
	BARIUM,		200.7	0.022	0.005	mg/L	02/11/99	RJE
	BERYLLIUM,		200.7	BDL	0.001	mg/L	02/11/99	RJE
	BORON,		200.7	0.06	0.05	mg/L	02/12/99	RJE
	CADMIUM,		213.2	BDL	0.0002	mg/L	03/08/99	RJE
	CHROMIUM,		200.7	BDL	0.01	mg/L		RJE
	COBALT,		200.7	BDL	0.01	mg/L	02/11/99	RJE
	COPPER,		220.2	BDL	0.001	mg/L	03/08/99	RJE
	IRON,	EPA	200.7	BDL	0.1	mg/L		RJE
	LEAD,		239.2	BDL	0.001	mg/L	03/05/99	RJE
	LITHIUM,		200.7	BDL	0.01	mg/L	02/12/99	RJE
	MAGNESIUM,		200.7	12	1	mg/L		RJE
	MANGANESE,	EPA	200.7	BDL	0.01	mg/L		RJE
	MERCURY,		245.1	BDL	0.0002	. mg/L	02/11/99	RJE
	METALS DIGESTION	,	WATER	-		-		EP
	MOLYBDENUM,		200.7	BDL	0.01	mg/L		RJE
	NICKEL,		249.2	BDL	0.005	mg/L		RJE
	SELENIUM,	EPA	200.7	BDL	0.1	mg/L		
	SILVER,		272.2	BDL	0.0005	mg/L		
	STRONTIUM,		200.7	0.14	0.01	mg/L		
	THALLIUM,		279.2	BDL	0.001	mg/L		
	URANIUM	EPA	200.7	BDL	0.1	mg/L		
	ZINC,		200.7	BDL	0.02	mg/L	02/11/99	RJE
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### TEST RESULTS BY SAMPLE

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	Sample: 22A	OUTFALL 00G	02/01/99	Collected: 02/01/99	Category:	AQUEOUS	
	<u>Test Descript</u> SULFIDE, TOTAL CYANIDE	EPA 376.1		Detection <u>Lt Limit</u> DL 1 DL 0.01	<u>Units</u> mg/L mg/L		<u>By</u> LG LG
	Sample: 23A	OUTFALL 00G	02/01/99	Collected: 02/01/99	Category:	AQUEOUS	
	Test Descript PHENOLICS,	EPA 420.1		DL 0.01	mg/L		<u>By</u> JB
	Sample: 24A	OUTFALL 00G	02/01/99	Collected: 02/01/99	Category:	AQUEOUS	
)	<u>Test Descript</u> CHLORINE, RES		<u>Resu</u> B	<u>Detection</u> <u>lt Limit</u> DL 0.05	<u>Units</u> mg/L	<u>Analyzed</u> 02/03/99	<u>By</u> Ml
	Sample: 25A	OUTFALL 00G	02/01/99	Collected: 02/01/99	Category:	AQUEOUS	
	Test Descript NITRATE-NITRI ORGANIC NITRO PHOSPHORUS,	TE N	_		<u>Units</u> mg/L mg/L mg/L	02/05/99 02/11/99	<u>By</u> LG JB LG
	TKN,	DFA 303.1	D D		шдуц	02/18/99	1.1.4
	I KIV,	EPA 351.3	В	DL 0.5	mg/L	02/06/99	JB
	Sample: 26A			DL 0.5 Collected: 02/01/99			-
	Sample: 26A	OUTFALL 00G			Category:	AQUEOUS	-
	·	OUTFALL 00G	02/01/99 <u>Resu</u>	Collected: 02/01/99	Category:		-
	Sample: 26A	OUTFALL 00G	02/01/99 <u>Resu</u> B	Collected: 02/01/99 Detection lt Limit	Category: <u>Units</u> mg/L	AQUEOUS Analyzed 02/10/99	JB <u>By</u>

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Crder.# 99-02-060 . 03/16/99 09:22	TEST RESULTS BY SAMPLE	Page 8
Sample: 28A OUTFALL 00G	02/01/99 Collected: 02/01/99 Category:	AQUEOUS
<u>Test Description</u> METHYLENE BLUE ACTIVE SUB. SULFATE, EPA 375.4 SULFITE,	BDL         0.01         mg/L           113         10         mg/L	<u>Analyzed</u> <u>By</u> 02/17/99 ML 02/18/99 JB 02/17/99 ML
Sample: 29A OUTFALL 00G	02/01/99 Collected: 02/01/99 Category:	AQUEOUS
Test Description ASBESTOS WATER	<u>Detection</u> <u>Result Limit Units</u> ND 0.2 MF/L, >10um	<u>Analyzed</u> <u>By</u> 02/12/99 EM
Sample: 31A OUTFALL 00C	02/01/99 Collected: 02/01/99 Category	AQUEOUS
<u>Test Description</u> 5day CBOD, EPA 405.1 SUSPENDED SOLIDS,EPA 160.2	4 2 mg/L	<u>Analyzed</u> <u>By</u> 02/08/99 PT 02/11/99 KC
Sample: 32A OUTFALL 00C	02/01/99 Collected: 02/01/99 Category	: AQUEOUS
Test Description COD, EPA 410.4 TOC, EPA 415.1	BDL 5. mg/L	<u>Analyzed</u> <u>By</u> 02/19/99 LG 02/09/99 JW
Sample: 33A OUTFALL 00C	02/01/99 Collected: 02/01/99 Category	: AQUEOUS
Test Description AMMONIA N, EPA 350.2	Detection Result Limit Units BDL 0.5 mg/L	
Sample: 35A OUTFALL 00C	02/01/99 Collected: 02/01/99 Category	: AQUEOUS
<u>Test Description</u> EPA 625 SEMI VOL. EXTRACT EXTRACTION, EPA 608	Detection Result Limit Units	<u>Analyzed</u> <u>By</u> SD SD



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#### TEST RESULTS BY SAMPLE

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Sample: 36A OUTFALL OOC

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02/01/99 Collected: 02/01/99 Category: AQUEOUS

					Detec	tion			
	<u>Test Descriptic</u>	<u>n</u>		Resu	<u>lt Lin</u>	nit	Units	Analyzed	By
	ALUMINUM,		200.7	E	BDL 0.	.05	mg/L	02/12/99	RJE
	ANTIMONY,	EPA	204.2	0.0	0.0	001	mg/L	03/05/99	RJE
	ARSENIC,	EPA	206.2	E	DL 0.0	001	mg/L	03/05/99	RJE
	BARIUM,	EPA	200.7	E	DL 0.0	005	mg/L	02/11/99	RJE
	BERYLLIUM,	EPA	200.7	E	DL 0.0	001	mg/L	02/11/99	RJE
	BORON,	EPA	200.7	E	DL 0.	.05	mg/L	02/12/99	RJE
	CADMIUM,	EPA	213.2	E	DL 0.00	02	mg/L	03/08/99	RJE
	CHROMIUM,	EPA	200.7	B	DL 0.	.01	mg/L	02/11/99	RJE
	COBALT,	EPA	200.7	B	DL 0.	01	mg/L	02/11/99	RJE
	COPPER,	EPA	220.2	0.0	12 0.0	001	mg/L	03/08/99	RJE
	IRON,	EPA	200.7	B	DL C	0.1	mg/L	02/11/99	RJE
	LEAD,		239.2	В	DL 0.0	001	mg/L	03/05/99	RJE
	LITHIUM,	EPA	200.7	В	DL O.	01	mg/L	02/12/99	RJE
)	MAGNESIUM,	EPA	200.7	В	DL	1	mg/L	02/12/99	rje 🕓
	MANGANESE,	EPA	200.7	0.	01 0.	01	mg/L	02/11/99	RJE
	MERCURY,		245.1	В	DL 0.00	02	mg/L	02/11/99	RJE
	METALS DIGESTIC		WATER		-		-		EP
	MOLYBDENUM,		200.7	В		01	mg/L	02/11/99	RJE
	NICKEL,		249.2	В	DL 0.0	05	mg/L	03/08/99	RJE
	SELENIUM,		200.7	в	DL C	).1	mg/L	02/11/99	RJE
	SILVER,		272.2	В	DL 0.00	05	mg/L	03/08/99	RJE
	STRONTIUM,		200.7	В	DL 0.	01	mg/L	02/12/99	RJE
	THALLIUM,		279.2	В	DL 0.0	01	mg/L	03/05/99	RJE
	URANIUM		200.7	В	DL 0	1.1	mg/L	02/15/99	RJE
	ZINC,	EPA	200.7	В	DL 0.	02	mg/L	02/11/99	RJE
	Sample: 37A O	UTFALL	000	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	
								-	
	Test Descriptio	-		_	Detec				
	SULFIDE,		276 1	Resu			<u>Units</u>	Analyzed	<u>By</u>
	TOTAL CYANIDE,		376.1		DL	1	mg/L	03/05/99	LG
	TOTAD CIANTDE,	EFA	335.2	В	DL 0.	01	mg/L	03/04/99	LG
	Sample: 38A O	UTFALL	000	02/01/99	Collected:	02/01/99	Category:	AQUEOUS	

			Detection			
<u>Test Descript</u>	ion	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	By
PHENOLICS,	EPA 420.1	BDL	0.01	mg/L	02/23/99	JB



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### TEST RESULTS BY SAMPLE

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Sample: 39A OUTFALL 00C	02/01/99 Co	llected: 02/01/99	Category:	AQUEOUS		
Detection						
Test Description	Result	Limit	Units	Analyzed	By	
CHLORINE, RESIDUAL TOTAL	BDL	0.05	mg/L	02/03/99	ML	
CHECKINE, RESIDUAL IOTAL		0100		,,		
Sample: 40A OUTFALL 00C	02/01/99 Co	llected: 02/01/99	Category:	AQUEOUS		
	•	Detection				
Test Description	Result	Limit	<u>Units</u>	<u>Analyzed</u>	By	
NITRATE-NITRITE N	BDL	0.2	mg/L	02/05/99	$\mathbf{LG}$	
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 Co	llected: 02/01/99	Category:	AQUEOUS		
-						
	<b>D</b> = ===1 =	<u>Detection</u> Limit	Unito	Analyzed	Dir	
Test Description	<u>Result</u>	<u>11m1C</u> 5	mg/L		<u>By</u> PT	
OIL & GREASE, EPA 413.1	BDL	D	шg/ ц	02/10/99	P1	
Sample: 42A OUTFALL 00C	02/01/99 Co	llected: 02/01/99	Category:	AQUEOUS		
		Detection				
Test_Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>		By	
GROSS ALPHA, IN WATER	BDL	- 3		03/08/99	SF	
GROSS BETA, IN WATER	BDL	4	pCi/L		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 Co	llected: 02/01/99	Category:	AQUEOUS		
		Detection				
Test Description	Result	Limit	Units	<u>Analyzed</u>	<u>By</u>	
METHYLENE BLUE ACTIVE SUB.	BDL	0.01	mg/L		ML	
SULFATE, EPA 375.4	BDL	10	mg/L		JB	
SULFITE,	BDL	2	mg/L		ML	
5621112,						
Sample: 44A OUTFALL 00C	02/01/99 Co	llected: 02/01/99	Category:	AQUEOUS		
		Detection				
Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>		<u>By</u>	
ASBESTOS WATER	ND	0.2 M	F/L, >10um	02/12/98	EM	

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#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 Test Description: EPA 624 Collected: 02/01/99

02/01/99 Lab No: 04A Method: 624 Category: AQUEOUS

Test Code: 624\_X

### PARAMETER

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RESULT

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 %RECOV	TERY	LIMITS	
D4-1,2 DICHLOROETHANE1	.2	76 -	114
D8-TOLUENE9	<u> </u>	88 -	110

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#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 04A Method: 624 Category: AQUEOUS

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Test Code: 624\_X

4-BROMOFLUOROBENZENE <u>96</u>

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Notes and Definitions for this Report:

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



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### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 02/01/9 Test Description: EPA 625 SEMI VOLATILES Collected: 02/01/99

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PARAMETER

02/01/99 Lab No: 05A TILES Method: 625 Category: AQUEOUS

LIMIT

RESULT

Test Code: 625\_AE

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-	<u>    10</u>
BIS (2-CHLOROISOPROPYL) ETHER	BDL	10
BIS (2-CHLOROETHOXY) METHANE	BDL	10
HEXACHLOROBUTADIENE	BDL	10
HEXACHLORÓCYCLOPENTADIENE	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

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Order # 99-02-060 03/16/99 09:22	TEST_RESULTS	BY SAMPLE	Page 14
Sample Description: Test Description: Collected:	EPA 625 SEMI VOLATILES	9 Lab No: 05A Method: 625 Category: AQUEOUS	Test Code: 625_AE
	L BENZYLPHTHALATE -BUTYL PHTHALATE	BDL 10 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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	85	<u> </u>	114
2-FLUOROBIPHENYL	72	43 -	116
p-TERPHENYL-d14	95	<u> </u>	141
PHENOL-d6	46	<u>   10</u> -	94
2-FLUOROPHENOL	74		100
2,4,6-TRIBROMOPHENOL	50	<u>    10</u> -	123

Notes and Definitions for this Report:

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



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PARAMETER

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

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### TEST RESULTS BY SAMPLE

RESULT

LIMIT

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

Test Code: 608

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	<b>%RECOVERY</b>	LIMITS	
DBC (SURROGATE,	<pre>% RECOVERY)</pre>	90	<u> </u>	130
2,4,5,6-TCX(SURRO	GATE % REC.)	<u> </u>	<u> </u>	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

(937) 837-3744



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#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 001 02/01 Test Description: PCB/PESTICIDES EPA 608 Collected: 02/01/99

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02/01/99 Lab No: 05A 608 Method: 608 Category: AQUEOUS

Test Code: 608

METHOD <u>EPA 608</u> BDL BELOW DETECTION LIMIT

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#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00102/01/99Lab No: 15ATest Description: Triaryl Phosphate Sub-OutMethod: Special Test Test Code: 8270\_UCollected: 02/01/99Category: AQUEOUS

PARAMETER	R	ESULT	LIMIT	
TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL		5
SURROGATE	*RECOVER	Y L	IMITS	
NITROBENZENE-D5	65		35 -	114
2-FLUOROBIPHENYL	78		43 -	116
p-TERPHENYL-d14	113		<u>33</u> -	141
PHENOL-d6	25		10 -	94
2 - FLUOROPHENOL	30		<u>21</u> -	100
2,4,6-TRIBROMOPHENOL	93		10 -	123

Notes and Definitions for this Report:

EXTRACTED <u>02/08/99</u>
DATE RUN <u>02/11/99</u>
analyst <u>jat</u>
INSTRUMENT <u>SATURN</u>
FILE ID 0206501W
UNITS <u>uq/L</u>
METHOD 8270
BDL BELOW DETECTION LIMIT

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# Belmonte Park Environmental atories

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00G Test Description: EPA 624 Collected: 02/01/99

02/01/99 Lab No: 19A Method: 624 Category: AQUEOUS

Test Code: 624\_X

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#### PARAMETER

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RESULT

ACROLEIN	BDL		20	
ACRYLONITRILE	BDL		20	
2-CHLOROETHYLVINYL ETHER	BDL	c	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	<u></u>	2	
1,3-DICHLOROBENZENE	BDL		2	
1,4-DICHLOROBENZENE	BDL		2	
METHYLENE CHLORIDE	BDL		10	
CHLOROMETHANE	BDL		10	
BROMOMETHANE	BDL		2	
BROMOFORM	BDL	<u></u>	2	
DICHLOROBROMOMETHANE	BDL		2	
TRICHLOROFLUOROMETHANE	BDL		2	
CHLORODIBROMOMETHANE	BDL		2	
TETRACHLOROETHYLENE	BDL	<del></del>	2	
TOLUENE	BDL		2	
TRICHLOROETHENE	BDL		2	
VINYL CHLORIDE	BDL		10	
XYLENES	BDL		10	
SURROGATE %RECOV	ERY	LIMIT	s	
D4-1,2 DICHLOROETHANE1		76		114
	<u>)2</u>	88		110

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Dayton, Ohio 45426



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

#### TEST\_RESULTS BY SAMPLE

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Sample Description: OUTFALL 00G Test Description: EPA 624 Collected: 02/01/99

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02/01/99 Lab No: 19A Method: 624 Category: AQUEOUS

Test Code: 624\_X

4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

86 -

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

93



Order	#	9	9	-	0	2	-	06	50	)
03/16/	99		0	9	:	2	2			

#### TEST RESULTS BY SAMPLE

RESULT

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LIMIT

Sample Description:OUTFALL 00G02/01/99Lab No: 20ATest Description:EPA 625 SEMI VOLATILESMethod: 625Collected:02/01/99Category: AQUEOUS

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PARAMETER

Test Code: 625\_AE

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



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

#### TEST RESULTS BY SAMPLE

Page 21

Sample Description: OUTFALL 00G 02/01/9 Test Description: EPA 625 SEMI VOLATILES Collected: 02/01/99

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02/01/99 Lab No: 20A CILES Method: 625 Category: AQUEOUS

1

Test Code: 625\_AE

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
<b>3,4-BENZOFLUORANTHENE</b>	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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	64	<u> </u>	114
2-FLUOROBIPHENYL	65	43 -	116
p-TERPHENYL-d14	<u> </u>	33 -	141
PHENOL-d6	35	<u>    10</u> -	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	IC
INSTRUMENT	GC/MS
FILE ID	<u>S9022525</u>
UNITS <u>uq</u>	<u>/L</u>
METHOD <u>E</u>	PA 625
BDL <u>BELO</u>	W DETECTION LIMIT



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# Belmonte Park Environmental tories

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Order	#	9	9	-	0	2	-	0	6	0
03/16/	99		0	9	:	2	2			

#### TEST RESULTS BY SAMPLE

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

Test Code: 608

PARAMETER
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RESULT

2	LIMIT
BDL	0.010

		( DD001000	7 T T M T T
TOXAPHENE		BDL	0.20
PCB-1260		BDL	0.10
PCB-1254		BDL	0.10
PCB-1248		BDL	0.10
PCB-1242		BDL	0.10
PCB-1232		BDL	0.10
PCB-1221		BDL	0.20
PCB-1016		BDL	0.10
HEPTACHLOR EPOXIDE	2	BDL	0.10
HEPTACHLOR		BDL	0.030
ENDRIN ALDEHYDE		BDL	0.020
ENDRIN		· BDL	0.010
ENDOSULFAN SULFATE	S	BDL	0.10
BETA ENDOSULFAN		BDL	0.010
ALPHA ENDOSULFAN		BDL	0.010
DIELDRIN		BDL	0.010
4,4-DDD		BDL	0.010
4,4-DDE		BDL	0.010
4,4-DDT		BDL	0.010
CHLORDANE		BDL	0.010
GAMMA-BHC		BDL	0.010
DELTA-BHC		BDL	0.010
BETA-BHC		BDL	0.010
ALPHA-BHC		BDL	0.010
ALDRIN		BDL	0.010

SURROGATE	<b>%RECOVERY</b>	LIMITS	
DBC (SURROGATE, % RECOVERY)	89	<u> </u>	130
2,4,5,6-TCX(SURROGATE % REC.)	94	<u> </u>	<u>   130</u>

#### Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 JW ANALYST GC INSTRUMENT FILE ID <u>A020914</u> UNITS <u>uq/L</u>

(937) 837-3744



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

#### TEST RESULTS BY SAMPLE

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Sample Description:OUTFALL 00G02/01/99Lab No: 20ATest Description:PCB/PESTICIDES EPA 608Method: 608Collected:02/01/99Category: AQUEOUS

2

Test Code: 608

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

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## Belmonte Park Environmental Laboratories

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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	LIMI	r
TRIPHENYL PHOSPHATE TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL	-	<u>5</u>
SURROGATE	%RECOV	ERY	LIMIT	5
NITROBENZENE-D5	6	<u> </u>	35	- <u>114</u>
2-FLUOROBIPHENYL	7	8	43	116
p-TERPHENYL-d14	11	5	33	- <u>141</u>
- PHENOL-d6	2	<u> </u>	10	94
2-FLUOROPHENOL	3	5	21	- <u>100</u>
2,4,6-TRIBROMOPHENOL	8	5	10	- <u>123</u>

Notes and Definitions for this Report: '

EXTRACTED C	2/08/99	
DATE RUN 02	2/11/99	
ANALYST JAT	<u>[</u>	
INSTRUMENT	SATURN	
FILE ID	0206504W	
UNITS <u>uq/I</u>		
METHOD	8270	
BDL BELOW	DETECTION	LIMIT

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# Belmonte Park Environmental aboratories

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL OOC Test Description: BPA 624 Collected: 02/01/99

02/01/99 Lab No: 34A Method: 624 J Category: AQUEOUS

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Test Code: 624 X

#### PARAMETER

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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, 1-TRICHLOROETHANE BDL 2 1, 1, 2-TRICHLOROETHANE BDL 2 1, 1, 2, 2-TETRACHLOROETHANE BDL 2 1, 1, 2, 2-TETRACHLOROETHANE BDL 2 1, 1, 2, 2-TETRACHLOROETHANE BDL 2 1, 1, 2, 2-TETRACHLOROETHYLENE BDL 2 1, 2-DICHLOROETHYLENE BDL 2 1, 2-DICHLOROETHYLENE BDL 2 1, 2-DICHLOROETHYLENE BDL 2 1, 2-DICHLOROPROPYLENE BDL 2 TRANS-1, 3-DICHLOROPROPYLENE BDL 2 1, 3-DICHLOROPROPYLENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 TRANS-1, 3-DICHLOROPROPYLENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 1, 4-DICHLOROBENZENE BDL 2 TRICHLOROBENZENE BDL 2 METHYLENE CHLORIDE BDL 2 METHYLENE CHLORIDE BDL 2 METHYLENE CHLORIDE BDL 2 TRICHLOROBENZENE BDL 2 METHYLENE CHLORIDE BDL 2 TRICHLOROBENZENE BDL 2 METHYLENE CHLORIDE BDL 10 MOMOMETHANE BDL 10 MOMOMETHANE BDL 2 METHYLENE CHLORIDE BDL 2 METHYLENE CHLORIDE BDL 2 METHYLENE BDL 10 MOMOMETHANE BDL 2 METHYLENE BDL 3 METHYLENE BDL 3 METHYLENE BDL 3 METHYLENE BDL 3 METHYLENE BDL 3 M	ACROLEIN	זמפ	20	
2-CHLOROETHYLVINYL ETHER       BDL       20         BENZENE       BDL       2         CARBON TETRACHLORIDE       BDL       2         CHLOROBENZENE       BDL       2         1, 2-DICHLOROETHANE       BDL       2         1, 1-TRICHLOROETHANE       BDL       2         1, 1, 1-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHYLENE       BDL       2         1, 1-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       10				
BENZENEBDL2CARBON TETRACHLORIDEBDL2CHLOROBENZENEBDL21, 2-DICHLOROETHANEBDL21, 1. 1-TRICHLOROETHANEBDL21, 1. 1-TRICHLOROETHANEBDL21, 1, 2-TRICHLOROETHANEBDL21, 1, 2-TRICHLOROETHANEBDL21, 1, 2-TRICHLOROETHANEBDL21, 1, 2, 2-TETRACHLOROETHANEBDL21, 1-DICHLOROETHYLENEBDL21, 1-DICHLOROETHYLENEBDL21, 2-TRANS-DICHLOROETHYLENEBDL21, 2-DICHLOROPROPANEBDL21, 2-DICHLOROPROPANEBDL21, 2-DICHLOROPROPYLENEBDL21, 2-DICHLOROPROPYLENEBDL21, 2-DICHLOROBENZENEBDL21, 2-DICHLOROBENZENEBDL21, 2-DICHLOROBENZENEBDL21, 4-DICHLOROBENZENEBDL21, 5-DICHLOROBENZENEBDL21, 5-DICHLOROBENZENEBDL21, 6-DICHLOROETHANEBDL21, 6-DICHLOROETHANEBDL				
CARBON TETRACHLORIDE       DDL       2         CHLOROBENZENE       BDL       2         1,2-DICHLOROETHANE       BDL       2         1,1.TTRICHLOROETHANE       BDL       2         1,1.TTRICHLOROETHANE       BDL       2         1,1.Z-TRICHLOROETHANE       BDL       2         1,1.Z-TRICHLOROETHANE       BDL       2         1,1.Z-TRICHLOROETHANE       BDL       2         1,1.Z-TRICHLOROETHANE       BDL       2         CHLOROETHANE       BDL       2         1,1.Z-TRICHLOROETHYLENE       BDL       2         1,2-TRANS-DICHLOROETHYLENE       BDL       2         1,2-TRANS-DICHLOROPROPANE       BDL       2         CIS-1,3-DICHLOROPROPANE       BDL       2         TRANS-1,3-DICHLOROPROPYLENE       BDL       2         I,2-DICHLOROBENZENE       BDL       2         1,3-DICHLOROBENZENE       BDL       2         1,4-DICHLOROBENZENE       BDL       2         1,4-DICHLOROBENZENE       BDL       2         METHYLENE CHLORIDE       BDL       2         METHYLENE       BDL       2         DICHLOROBENZENE       BDL       2         DICHLOROBENZENE				
CHLOROBENZENE       BDL       2         1, 2-DICHLOROETHANE       BDL       2         1, 1, 1-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHANE       BDL       10         CHLOROFTANE       BDL       2         1, 1, 2, 2-TETRACHLOROETHYLENE       BDL       2         1, 1-DICHLOROETHYLENE       BDL       2         1, 1-DICHLOROETHYLENE       BDL       2         1, 2-TRANS-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPYLENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         METHYLENE       CHLOROBENZENE       BDL       2         METHYLENE       CHLOROBENZENE       BDL <td></td> <td></td> <td></td> <td></td>				
1, 2-DICHLOROETHANE       BDL       2         1, 1, 1-TRICHLOROETHANE       BDL       2         1, 1, 2-TRICHLOROETHANE       BDL       2         1, 1, 2-TRACHLOROETHYLENE       BDL       2         1, 1-DICHLOROETHYLENE       BDL       2         1, 2-TRANS-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPYLENE       BDL       2         1, 3-DICHLOROPROPYLENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         METHYLENE CHLORIDE       BDL       2         METHYLENE       BDL       2         ICHLOROMETHANE       BDL       2				
1,1,1-TRICHLOROETHANE       EDL       2         1,1-DICHLOROETHANE       EDL       2         1,1,2-TRICHLOROETHANE       EDL       2         1,1,2,2-TETRACHLOROETHANE       EDL       2         1,1,2,2-TETRACHLOROETHANE       EDL       2         1,1,2,2-TETRACHLOROETHANE       EDL       2         1,1,2,2-TETRACHLOROETHANE       EDL       2         1,1,2,2-TETRACHLOROETHYLENE       EDL       2         1,1-DICHLOROETHYLENE       EDL       2         1,2-TRANS-DICHLOROETHYLENE       EDL       2         1,2-DICHLOROPROPANE       EDL       2         1,2-DICHLOROPROPANE       EDL       2         1,2-DICHLOROPROPANE       EDL       2         1,2-DICHLOROPROPYLENE       EDL       2         1,2-DICHLOROBENZENE       EDL       2         1,4-DICHLOROBENZENE       EDL       2         1,4-DICHLOROBENZENE       EDL       2         1,4-DICHLOROBENZENE       EDL       2         1,4-DICHLOROBENZENE       EDL       10         CHLOROMETHANE       EDL       2         DICHLOROBENZENE       EDL       2         CHLOROMETHANE       EDL       2         DICHL				
1,1-DICHLOROETHANE       BDL       2         1,1,2-TRICHLOROETHANE       BDL       2         1,1,2,2-TETRACHLOROETHANE       BDL       2         CHLOROETHANE       BDL       10         CHLOROETHANE       BDL       10         CHLOROETHANE       BDL       2         1,1,2,2-TETRACHLOROETHANE       BDL       2         CHLOROETHANE       BDL       2         1,1-DICHLOROETHYLENE       BDL       2         1,2-TRANS-DICHLOROPROPANE       BDL       2         1,2-DICHLOROPROPANE       BDL       2         CIS-1,3-DICHLOROPROPYLENE       BDL       2         TRANS-1,3-DICHLOROPROPYLENE       BDL       2         I,2-DICHLOROBENZENE       BDL       2         1,2-DICHLOROBENZENE       BDL       2         1,3-DICHLOROBENZENE       BDL       2         1,4-DICHLOROBENZENE       BDL       2         METHYLENE CHLORIDE       BDL       10         CHLOROMETHANE       BDL       2         DICHLOROBENZENE       BDL       10         BROMOFORM       BDL       2         METHYLENE       CHLORIDE       2         DICHLOROBENZENE       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-DICHLOROFROPANE       BDL       2         1, 2-DICHLOROPROPYLENE       BDL       2         1, 3-DICHLOROPROPYLENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         METHYLENE CHLORIDE       BDL       10         CHLOROMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         CHLOROBROMOMETHANE       BDL       2         TRICHLOROETHYLENE       BDL       2         TRICHLOROETHYLENE <td></td> <td></td> <td></td> <td></td>				
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         1, 2 - DICHLOROPROPANE       BDL       2         CIS - 1, 3 - DICHLOROPROPYLENE       BDL       2         TRANS - 1, 3 - DICHLOROPROPYLENE       BDL       2         1, 2 - DICHLOROBENZENE       BDL       2         1, 3 - DICHLOROBENZENE       BDL       2         1, 4 - DICHLOROBENZENE       BDL       2         1, 4 - DICHLOROBENZENE       BDL       10         CHLOROMETHANE       BDL       10         CHLOROMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         DICHLOROFLUOROMETHANE       BDL       2         DICHLOROFLUOROMETHANE       BDL       2         CHLOROFLUOROMETHANE       BDL       2         DICHLOROFLUOROMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TRICHLOROETHYLENE       BDL       2				
CHLOROETHANEBDL10CHLOROFORMBDL21,1-DICHLOROETHYLENEBDL21,2-TRANS-DICHLOROETHYLENEBDL21,2-DICHLOROPROPANEBDL2CIS-1,3-DICHLOROPROPYLENEBDL2TRANS-1,3-DICHLOROPROPYLENEBDL2ETHYLBENZENEBDL21,3-DICHLOROBENZENEBDL21,3-DICHLOROBENZENEBDL21,4-DICHLOROBENZENEBDL21,4-DICHLOROBENZENEBDL10CHLOROMETHANEBDL10BROMOMETHANEBDL2DICHLOROBROMOMETHANEBDL2TRICHLOROFLUOROMETHANEBDL2CHLORODIBROMOMETHANEBDL2TRICHLOROETHYLENEBDL2TRICHLOROETHYLENEBDL2VINYL CHLORIDEBDL2VINYL CHLORIDEBDL2VINYL CHLORIDEBDL2VINYL CHLORIDEBDL2VINYL CHLORIDEBDL10SURROGATE\$RECOVERYLIMITSD4-1,2 DICHLOROETHANE11476 - 114				
CHLOROFORM       BDL       2         1, 1-DICHLOROETHYLENE       BDL       2         1, 2-TRANS-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         CIS-1, 3-DICHLOROPROPYLENE       BDL       2         TRANS-1, 3-DICHLOROPROPYLENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       10         CHLOROMETHANE       BDL       10         BROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         CHLORODIBROMOMETHANE       BDL       2         TOLUENE       BDL       2         TRICHLOROETHYLENE       BDL       2         VINYL CHLORIDE       BDL       2         VINYL CHLORIDE       BDL       10         XYLENES       BDL       10         SURROGATE       \$RECOVERY       L				
1, 1-DICHLOROETHYLENE       BDL       2         1, 2-TRANS-DICHLOROETHYLENE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPANE       BDL       2         1, 2-DICHLOROPROPYLENE       BDL       2         TRANS-1, 3-DICHLOROPROPYLENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 2-DICHLOROBENZENE       BDL       2         1, 3-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       2         1, 4-DICHLOROBENZENE       BDL       10         CHLOROBENZENE       BDL       10         CHLOROBENZENE       BDL       10         BROMOMETHANE       BDL       2         DICHLOROBENZENE       BDL       2         DICHLOROBENZENE       BDL       2         BROMOFORM       BDL       2         DICHLOROBENZENE       BDL       2         DICHLOROFILOROMETHANE       BDL       2         TRICHLOROFILOROETHANE       BDL       2         TETRACHLOROETHENE       BDL </td <td></td> <td></td> <td></td> <td></td>				
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         1, 4 - DICHLOROBENZENE       BDL       2         1, 4 - DICHLOROBENZENE       BDL       2         METHYLENE CHLORIDE       BDL       10         CHLOROMETHANE       BDL       10         BROMOFORM       BDL       2         DICHLOROBROMOMETHANE       BDL       2         BROMOFORM       BDL       2         DICHLOROBROMOMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TETRACHLOROETHYLENE       BDL       2         TOLUENE       BDL       2         TRICHLOROETHENE       BDL       2         VINYL CHLORIDE       BDL       10         XYLENES       BDL       10         SURROGATE       \$RECOVERY		-		
1,2-DICHLOROPROPANE       BDL       2         CIS-1,3-DICHLOROPROPYLENE       BDL       2         TRANS-1,3-DICHLOROPROPYLENE       BDL       2         TRANS-1,3-DICHLOROPROPYLENE       BDL       2         1,2-DICHLOROBENZENE       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         DICHLOROBROMMETHANE       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       -				
CIS-1, 3-DICHLOROPROPYLENEBDL2TRANS-1, 3-DICHLOROPROPYLENEBDL2ETHYLBENZENEBDL21, 2-DICHLOROBENZENEBDL21, 3-DICHLOROBENZENEBDL21, 4-DICHLOROBENZENEBDL2METHYLENE CHLORIDEBDL10CHLOROMETHANEBDL2BROMOFORMBDL2DICHLOROBENOMMETHANEBDL2DICHLOROFLUOROMETHANEBDL2CHLOROFLUOROMETHANEBDL2TRICHLOROFLUOROMETHANEBDL2TETRACHLOROETHYLENEBDL2TRICHLOROETHYLENEBDL2TRICHLOROETHYLENEBDL2VINYL CHLORIDEBDL10XYLENESBDL10SURROGATE\$RECOVERYLIMITSD4-1, 2 DICHLOROETHANE11476				
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         DICHLOROBROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         CHLOROFLUOROMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TOLUENE       BDL       2         TRICHLOROETHYLENE       BDL       2         VINYL CHLORIDE       BDL       10         XYLENES       BDL       10         SURROGATE       %RECOVERY       LIMITS         D4-1, 2 DICHLOROETHANE       114       76       -				
ETHYLBENZENEBDL21, 2-DICHLOROBENZENEBDL21, 3-DICHLOROBENZENEBDL21, 4-DICHLOROBENZENEBDL2METHYLENE CHLORIDEBDL10CHLOROMETHANEBDL10BROMOFORMBDL2DICHLOROBROMOMETHANEBDL2DICHLOROFLUOROMETHANEBDL2CHLOROFLUOROMETHANEBDL2CHLOROFLUOROMETHANEBDL2TETRACHLOROETHYLENEBDL2TRICHLOROETHYLENEBDL2VINYL CHLORIDEBDL2VINYL CHLORIDEBDL10SURROGATE%RECOVERYLIMITSD4-1,2 DICHLOROETHANE11476114				
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         DICHLOROBROMOMETHANE       BDL       2         DICHLOROBROMOMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         CHLORODIBROMOMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TRICHLOROFLUOROMETHANE       BDL       2         TOLUENE       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				
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       TRICHLOROFLUOROMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       TRICHLOROETHYLENE     BDL     2       TOLUENE     BDL     2       TRICHLOROETHENE     BDL     2       VINYL CHLORIDE     BDL     10       XYLENES     BDL     10       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76		· · · · ·		
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     2       VINYL CHLORIDE     BDL     10       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76	•			
METHYLENE CHLORIDEBDL10CHLOROMETHANEBDL10BROMOMETHANEBDL2BROMOFORMBDL2DICHLOROBROMOMETHANEBDL2TRICHLOROFLUOROMETHANEBDL2CHLORODIBROMOMETHANEBDL2TETRACHLOROFLUOROMETHANEBDL2TOLUENEBDL2TOLUENEBDL2TRICHLOROETHENEBDL2VINYL CHLORIDEBDL10SURROGATE%RECOVERYLIMITSD4-1,2 DICHLOROETHANE11476 - 114				
CHLOROMETHANE     BDL     10       BROMOMETHANE     BDL     2       BROMOFORM     BDL     2       DICHLOROBROMOMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       CHLORODIBROMOMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     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	•			
BROMOMETHANE     BDL     2       BROMOFORM     BDL     2       DICHLOROBROMOMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       CHLORODIBROMOMETHANE     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				
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       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76				
DICHLOROBROMOMETHANE     BDL     2       TRICHLOROFLUOROMETHANE     BDL     2       CHLORODIBROMOMETHANE     BDL     2       TETRACHLOROETHYLENE     BDL     2       TOLUENE     BDL     2       TRICHLOROETHENE     BDL     2       VINYL CHLORIDE     BDL     10       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76				
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				
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				
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				
TOLUENE     BDL     2       TRICHLOROETHENE     BDL     2       VINYL CHLORIDE     BDL     10       XYLENES     BDL     10       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76     114				
TRICHLOROETHENE     BDL     2       VINYL CHLORIDE     BDL     10       XYLENES     BDL     10       SURROGATE     %RECOVERY     LIMITS       D4-1,2 DICHLOROETHANE     114     76 - 114				
VINYL CHLORIDE BDL XYLENES BDL 10 BDL SURROGATE %RECOVERY LIMITS D4-1,2 DICHLOROETHANE 114 76114				
XYLENES     Image: Superior of the system       SURROGATE     %RECOVERY       D4-1,2     DICHLOROETHANE       114     76				
SURROGATE %RECOVERY LIMITS D4-1,2 DICHLOROETHANE <u>114</u> <u>76</u> - <u>114</u>		BDL	10	
D4-1,2 DICHLOROETHANE <u>114</u> <u>76</u> - <u>114</u>	XYLENES	BDL	10	
	SURROGATE	<b>%RECOVERY</b>	LIMITS	
D8-TOLUENE <u>94</u> <u>88</u> - <u>110</u>	D4-1,2 DICHLOROETHANE	114	76 -	114
	D8-TOLUENE	94	88 -	

Committed to Quality Since 1958

Dayton, Ohio 45426



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Order # 99-02-060			-	Page 26
03/16/99 09:22	TF	EST RESULTS BY SAMPLE	<u>,</u> _	
Sample Description: Test Description: Collected:	EPA 624	02/01/99 Lab No: Method: Category:	624	Test Code: 624_X
4-BF	ROMOFLUOROBENZEN	NE <u>93</u>	86 -	115
		Notes and Definitions	for this	Report:
		DATE RUN <u>02/09/99</u> ANALYST <u>JMM</u> INSTRUMENT <u>GC/MS</u>	ς	

FILE ID <u>9020936</u> UNITS <u>uq/L</u> METHOD <u>EPA 624</u>

BDL BELOW DETECTION LIMIT

Committed to Quality Since 1958 Dayton, Ohio 45426

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## Belmonte Park Environmental Laboratories

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PARAMETER

Order	#	99	) -	0	2	-	060
03/16/	99	C	)9	:	2	2	

#### TEST RESULTS BY SAMPLE

RESULT

LIMIT

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Sample Description:OUTFALL 00C02/01/99Lab No: 35ATest Description:EPA 625SEMI VOLATILESMethod: 625Collected:02/01/99Category: AQUEOUS

Test Code: 625\_AE

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	<u>· 10</u>
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

Committed to Quality Since 1958



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

#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 00C Test Description: EPA 625 SEMI VOLATILES Collected: 02/01/99

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02/01/99 Lab No: 35A Method: 625 Category: AQUEOUS

Test Code: 625\_AE

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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	<u>. 77</u>	<u> </u>	114
2-FLUOROBIPHENYL	66	43 -	<u>    116</u>
p-TERPHENYL-d14	82	<u> </u>	141
PHENOL-d6	62	10 -	94
2-FLUOROPHENOL	71		100
2,4,6-TRIBROMOPHENOL	66	<u>   10</u> -	123

Notes and Definitions for this Report:

EXTRACTED 02/07/99	
DATE RUN <u>02/25/99</u>	
ANALYST <u>TC</u>	
INSTRUMENT <u>GC/MS</u>	
FILE ID 59022526	
UNITS <u>ug/L</u>	
METHOD EPA 625	
BDL BELOW DETECTION LIMIT	2



**Belmonte** Park Environmental aboratories

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

#### TEST RESULTS BY SAMPLE

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

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PARAMETER

Method: 608 Category: AQUEOUS

LIMIT

0.010

0.010

0.010

0.010

0.010

0.010 0.010

0.010

0.010

0.010

0.010

0.010

0.10

0.010

0.020

0.030

0.10

0.10

0.20

0.10

0.10

RESULT

Test Code: 608

ALDRIN	BDL
ALPHA-BHC	BDL
BETA-BHC	BDL
DELTA-BHC	BDL
GAMMA-BHC	BDL
CHLORDANE	BDL
4,4-DDT	BDL
4,4-DDE	BDL
4,4-DDD	BDL
DIELDRIN	BDL
ALPHA ENDOSULFAN	BDL
BETA ENDOSULFAN	BDL
ENDOSULFAN SULFATE	BDL
ENDRIN	BDL
ENDRIN ALDEHYDE	BDL
HEPTACHLOR	BDL
HEPTACHLOR EPOXIDE	BDL

PCB-1016 BDL PCB-1221 BDL PCB-1232 BDL PCB-1242 BDL

PCB-1248	BDL	0.10	
PCB-1254	BDL	0.10	
PCB-1260	BDL	0.10	
TOXAPHENE	BDL	0.20	

SURROGATE	*RECOVER	Y LIMITS	
DBC (SURROGATE, % RECOVERY)	93	<u> </u>	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 <u>uq/L</u>

(937) 837-3744



# Belmonte Park Environmental Laboratories

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00C 02/03 Test Description: PCB/PESTICIDES EPA 608 Collected: 02/01/99 Page 30

02/01/99 Lab No: 35A A 608 Method: 608 Test Code: 608 Category: AQUEOUS

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>



i

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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-D5	63	<u> </u>	114
2-FLUOROBIPHENYL	70	43 -	116
p-TERPHENYL-d14	100	<u> </u>	141
PHENOL-d6	25	10 -	.94
2-FLUOROPHENOL	38		100
2,4,6-TRIBROMOPHENOL	83	10 -	123

Notes and Definitions for this Report:

EXTRACTED <u>02/08/99</u>						
DATE RUN <u>02/11/99</u>						
ANALYST <u>JAT</u>						
INSTRUMENT SATURN						
FILE ID0206503W						
UNITS ug/L						
METHOD 8270						
BDL BELOW DETECTION LIMIT						

Page 31

Themay hanne.	PDES Permit number. 110005827	Outfall Number. 00G	
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### 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:

<u>Strontium</u> was detected in Outfall 00G (Reverse Osmosis System Reject). There are <u>no</u> <u>plant processes</u> that use strontium. Strontium is a trace element (21<sup>st</sup> 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 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

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PLEASE TYPE OR PRINT

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FACILITY NAME	NPDES or COC PERMIT NUMBER	Outfall Number
Donald C. Cook Nuclear Plant	M10005827	00G
9. WATER TREATMENT ADDITIVES		
Water Treatment Additive	Approval Date	
Hydrochloric Acid (pH control)	11/14/96 change of process application, 11/2	25/96 approval.
	NPDES Permit application approval 9/28/00.	5/23/00
Sulfunc Acid	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	25/96 approval 5/23/00
Sodium Hydroxide	11/14/96 change of process application, 11/ 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, 11/14/96 change of process application, 11/	5/23/00 25/96 approval
Citric Acid	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, 11/14/96 change of process application, 11/	25/96 approval.
Tide Detergent or equivalent	NPDES Permit application approval 9/28/00, 5/23/00	
		· · · · · · · · · · · · · · · · · · ·
		<u> </u>

# Section III.B Outfall 00H



# Michigan Department of Environmental Quality- Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

<b>U</b> 1 (	he ap	oplication for additional outfa	lls as necessary.	•		ll at the facility Mak					
		TYPE OR PRINT ( NAME Donald C. Cook Nucle			PDES PERMIT	NUMBER	OUT 00H	FALL NUMBER			
1.	OUTFALL INFORMATION (see page 25 for instruction on completion										
	A.	Watershed Lower St Joseph					4				
	в.	Receiving Water Lake Michigan									
	C.	County Berrien			Township Lake						
	D.	1/4, 1/4 1	4 1W	Section 06		Town 06S	Range 19W				
	E.	Latitude 41 58' 30"			Longitude 86 34' 30"						
	F.	Type of Wastewater Discharged	I (Check all that apply to	this outfall)			1				
	••	Contact Cooling	Sanitary Waster		Ground	lwater Cleanup	Storm \	Water (regulated)			
		Noncontact Cooling	Process Wastew	rater	Hydros	tatic Pressure Test	Storm \	Water (not regulated)			
		Storm water subject to efflue				-					
		Other – specify (see "Table			er" in appendix)	<u> </u>					
	J.	What is the maximum Facility D	esign Flow Rate 26	MGD							
	G	What is the maximum discharge	e flow authonzed for this	outfall. Seas	sonal Discharge	ers		nue with Item H.			
				Cont	inuous Dischar	gers <u>2.6</u>	MGD Cont	inue with Item I.			
	Н.	Seasonal Discharge	ponth) and the volume dis	charged in the	e space provide	d below.					
		From	Through			List the discharge periods (by month) and the volume discharged in the space provided below.					
						Discharge Volume		Annual Total			
	From Through					Discharge Volume		Annual Total			
1		From	Through			Discharge Volume		Annual Total			
		From	Through			Discharge Volume		Annual Total			
						Discharge Volume		Annual Total			
	I	From From Continuous Discharge How often is there a discharge Batch dischargers must prov Is there effluent flow equalization	from this outfall (on the a	onal informati		Discharge Volume Discharge Volume Discharge Volume	r	Annual Total			
	I	From From Continuous Discharge How often is there a discharge Batch dischargers must prov	from this outfall (on the a	onal informati	ion: of batches disc	Discharge Volume Discharge Volume Discharge Volume ay <u>365</u> Days/Yea	-				
	I	From From Continuous Discharge How often is there a discharge Batch dischargers must prov Is there effluent flow equalization	from this outfall (on the a	onal informati	ion: of batches disc	Discharge Volume Discharge Volume Discharge Volume	-	Annual Total			

# 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		
		NPDES PERMIT NUMBER	
	Donald C. Cook Nuclear Plant	MI0005827	ООН
2.	PROCESS STREAMS CONTRIBUTING TO OUTFALL DISCHARGE This information is used to determine the applicable federal regulation the type of facility. Page 7 of the appendix contains an abbreviated application. For assistance call the Permits Section. All industries s process. If the wastestream is not regulated under federal categorical potential to be present in the discharge. To submit additional informa-	ns for this discharge. The information requir list of various industries and the types of ir hall provide the name of each process and al standards, the applicant shall report all pol	nformation each shall report in this the SIC or the NAICS code for the
-	PROCESS INFORMATION A. Name of the process contributing to the discharge. <u>Steam electric</u>	ç	
	B. SIC or NAICS code 4911		
	C. Describe the process and provide measures of production (see th various contributing waste streams in Section I, Item 10.	e instructions to determine the appropriate in	nformation to be reported). See
	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 th	e instructions to determine the appropriate in	iformation to be reported):
	PROCESS INFORMATION A. Name of the process contributing to the discharge.	· · · · · · · · · · · · · · · · · · ·	
	B. SIC or NAICS code		I
	C Describe the process and provide measures of production (see th	e instructions to determine the appropriate ir	iformation 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	e instructions to determine the appropriate ir	iformation 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	e instructions to determine the appropriate ir	nformation 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<sub>5</sub>, 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 81/2" 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:  $\mu g/l = micrograms$  per liter, mg/l = milligrams per liter,  $^{\circ}F =$  degrees Fahrenheit,  $^{\circ}C =$  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<sub>5</sub>, 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<sub>5</sub>, 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

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SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

ASE TYPE OR PRINT		monnation	,	-		
JILITY NAME Donald C. Cook Nuclear Plant	· · · · · · · · · · · · · · · · · · ·	NPDES PERMIT NU	JMBER .			
		MI0005827		- 00H -	-	
. 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	Monthly Concentration	. Units	Number of Analyses	Sample Type	
Biochemical Oxygen Demand - five day (BOD <sub>5</sub> )	26 7	26.7	mg/l	2	☐ Grab ⊠ 24 Hr Comp	
COD (Chemical oxygen demand)	8 07	8 07	mg/i	2	Grab	
TOC (Total organic carbon)	2	2	mg/l	2	Grab	
Ammonia Nitrogen (as N)	3 88	3 88	mg/l	2	Grab	
Total Suspended Solids	15	15	mg/l	2	Grab	
Total Dissolved Solids	4104	3108	mg/l	52	Grab	
Total Phosphorus (as P)	0.5	0 09	mg/l	98	Grab	
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 Uso	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	
Temperature, Summer	*NA	*NA	□℉□℃	*NA	Grab	
Temperature, Winter	*NA	*NA	□°F□°C	*NA	Grab	
Oil & Grease	89	6	mg/l	120	Grab	
Hydrazine	5 54	14 04	mg/l	120	Grab	
					Grab 24 Hr Comp	
					Grab 24 Hr Comp	
See Attached for additional Data					Grab	
* NA - Internal Outfall					Grab 24 Hr Comp	
					Grab	
					Grab 24 Hr Comp	
					Grab 24 Hr Com	
					Grab	

# 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			
·	Donald C Cook Nuclear Plant	M10005827	00H	
4	PRIMARY INDUSTRY PRIORITY POLLUTANT INFORMATION Existing primary industries that discharge process wastewater must sub identified in Table 2 (as determined from Table 1, <u>Testing Requirement</u> identified in Table 3 Existing primary industries must also provide the 2 known or believed to be present in facility effluent	is for Organic Toxic Pollutants by Industrial Catego	$r\gamma$ ), and all the pollutants	
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 Tables 2 and 3 expected to be present in facility effluent.	must provide an estimated effluent concentration t	for any chemical listed in	
5.	DIOXIN AND FURAN CONGENER INFORMATION			
	Existing industries that use or manufacture 2,3,5-trichlorophenoxy ace TP); 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon), trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has rea facility effluent, must submit the results of at least one effluent analysis dioxin and furan congeners must be conducted using EPA Method 1613	0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorot ison to believe that 2,3,7,8-Tetrachlorodibenzo-p-du for the dioxin and furan congeners listed in Table 6 3.	All effluent analyses for	
	In addition, submit the results of all other effluent analyses performed v	within the last 5 years for any dioxin and furan conge	ener listed in Table 6	
	New industries that expect to use or manufacture 2,3,5-trichlorophene 2,3,5-TP), 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbo trichlorophenol (TCP) or hexachlorophrene (HCP), or knows or has rea facility effluent must provide estimated effluent concentrations for the di	oxy acetic acid (2,4,5-T), 2- (2,3,5-trichlorophenoxy on); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphore ason to believe that 2,3,7,8-Tetrachlorodibenzo-p-di	/) propanoic acid (Silvex, othionate (Ronnel), 2,4,5-	
- A	OTHER INDUSTRY PRIORITY POLLUTANT INFORMATION			
í	Existing secondary industries, or existing primary industries that dischar analysis for any chemical listed in Tables 2 and 3 known or believed to	arge non-process wastewater, must submit the resu be present in facility effluent	Its of at least one effluent	
	In addition, submit the results of all other effluent analyses performed w			
	New secondary industries, or new primary industries that propose concentration for any chemical listed in Tables 2 and 3 expected to be	to discharge non-process wastewater, must provi present in facility effluent.	de an estimated effluent	
7.	ADDITIONAL TOXIC AND OTHER POLLUTANT INFORMATION All existing industries, regardless of discharge type, must provide the believed to be present in facility effluent, and a measured or estimated be present in facility effluent. In addition, submit the results of any of Tables 4 and 5.	effluent concentration for any chemical listed in Tal effluent analysis performed within the last 5 years	for any chemical listed in	
	New industnes, regardless of discharge type, must provide an estimate be in facility effluent	ed effluent concentration for any chemical listed in T	ables 4 and 5 expected to	
8.	INJURIOUS CHEMICALS NOT PREVIOUSLY REPORTED New or existing industries, regardless of discharge type, must provid injurious chemicals known or believed to be present in facility efflue effluent data that are less than 5 years old for these chemicals must be	ent that have not been previously identified in this	for any toxic or otherwise s application. Quantitative	
	NOTE: All effluent data submitted in response to questions 4, 5, 6, 7, a see page ii, item 8 If the effluent concentrations are estimated, p completed for each data row Parameter, CAS No, Concentration(s See page ii, number 5 for analytical test requirements	lace an E in the "Analytical Method" column. In	e tollowing lields must be	
-1 2				

# Michigan Department of En imental Quality- Water Division WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION III - Industrial and Commercial Wastewater

B. Outfall Information

PLEASE TYPE OR PR	INT													•	
FACILITY NAME	_					NPDES PERMI	T NUMBER	1		OUTFALL N	UMBER				
Donald C. Cook Nuclea		<u> </u>	1		<u>_</u>	/10005827		1		00H					`
SAMPLE												1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1 1 2 2472 1 3 ALT CONTON 15		instration
PARAMETER	CAS No.	,≓¦Conc.≂ (ug/l)	Conc. (ug/l)	د Conc. د (ug/l)	Conc. (ug/i)		ा Conc. े (ug/l)	Conc. (ug/l)	Conc.	Conc. 👔	conc. (ug/l)	Sample Type	Analytic	CL RA	DL T
														`	1
														, ,	• `,
See Attached															4
for additional														8	•
data.															
															•
															4
														ı	
														· .	
														n	٣
														4	· · ·
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														s 1	
														2	
														3	

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### Section III.B.6 and 7

## Additional Sample Data Summary Sheet

For	Outfal	II 00H
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Parameter	2/3/99	3/26/02	5/30/02	Sample type	Max Daily	Analytical Method	Max monthly	# of Analyses
Table 2 data r 64 Protection				hora and the	(Anthesi'r 1977	MILAC 24	ioning and	Trigger Parket
See Attached data set from Be	elmonte Park Laborat	ories.	A. 6 10 14 1384	<u> </u>				
Table 3 + 1: Table 3 + 1:	1 the order of a strict - D	- 14 Halla Bater Ker	1 1 1 1 1 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Marrield	4 3300 . T. Balle 4	AFFER CLA	Statistic Co	r Harley
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	4 2
Zinc (ug/l)	- i '	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)		, 107	4.7	Grab	10.7	1631	10.7	2
Table 4	FTRADERCEARY 7-99	Strange Strategy	Shiften and	THE ALL PROPERTY OF	A second and the second	unes restant		Constant Col
See Attached data set from B			Ĩ					
See Attached data set.	1	•						
Table 5	STREET, CALLSTON	被国际政策计会合的	<u> 1954 (</u> gaj	Space States	Y STREET	green is	民族政策分裂	. Margareta
See Attached data set from B	elmonte Park Laborat	tories.						
See Attached data set.					+			
		· · · · · · · · · · · · · · · · · · ·						

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## NPDES Application Section III.B.6&7 Table 4 data for Outfall OOH

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Analyzed by Cook Plant Lab. (TRS Discharge to Groundwater operating data)

		O&G mg/l	Date	O&G mg/l			QL	<b>DL</b> 5	
450 $450$ </td <td><u>n-99</u></td> <td>&lt;5.0</td> <td>Nov-99</td> <td>&lt;5.0</td> <td>Grab</td> <td>USEPA 413 1</td> <td>, <b>15</b></td> <td>5</td> <td><math>\sim</math></td>	<u>n-99</u>	<5.0	Nov-99	<5.0	Grab	USEPA 413 1	, <b>15</b>	5	$\sim$
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$e \le 0$ <			<u></u>		4				
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			Oct-00	<50	1				
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# 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	Analytical Sample type method QL DL
Jan-01	39	Dec-01	41 -	Composite USEPA 375 4 30 1
Jan-OT	42		41	
	74		42	4
	41		41	4
	55		41	
	43	Jan-02	43	- ···
		Jan-02		
	47		34	- ·
	46		25	4
	1550			-
	196		34	
Feb-01	49	Feb-02 -	27	-
	50		26	
	41		35	
	39		34	4
Mar-01	44	Mar-02	28	4
	125	L	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	4
	34		27	
	43	Jun-02	23	-
Jun-01	50	001102	92	-
501-01	39		39	-
	37		47	- ·
	39	Jul-02	38	4
Jul-01	26	00-02	53	-
<u>Jui-01</u>	20		48	-
	38		35	-
			20	-
	34	Aug 00	20	-
Aug-01	37	Aug-02	49	- ·
	902	{		-
	74		57	-
	42	<u> </u>	49	- ·
	41	Sep-02	53	
	38	-	42	4
	26	ļ	41	
Sep-01	24		52	4
	26	Oct-02	52	_
	21		47	
	700	•	50	
Oct-01	19		<sup>4</sup> 61	
	31		- 70	
	28	Nov-02	84	
<u>-</u>	38		53	
	31	- ~	41	
Nov-01	45		48	7
	37	Dec-02	249	1
	34		64 .	1
	37	1	-	1

# NPDES Application Section III.B.6&7 Table 4 data for Outfall OOH Analyzed by Cook Plant Lab. (TRS Discharge to Groundwater operating data)

	Total		Total
-	Phosphorus	-, -	Phosphorus
Date	mg/l	Date	mg/l
Jan-99	0 04	Feb-00	0.02
	0.01		<0 01
	0.01	- <u></u>	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		1
	<0.01		
•	0.03		
	0 45		I
Jan-00	0 05	· · · · · · · · · · · · · · · · · · ·	<u> </u>
	0.28	······································	1
	0 03		<u> </u>
	0 07		

	Analytical				-
Sample type Composite	method USEPA 365 1	QL	0.3	DL 0.1	

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# NPDES Application Section III.B.6&7 Table 5 data for Outfall OOH

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Analyzed by Cook Plant Lab. (TRS Discharge to Groundwater operating data)

_	Hydrazine		Hydrazine		Hydrazine		Analytical	~	~		
Date	ug/i	Date	ug/I	Date	ug/l	Sample type	method	QL			
Oct-00	<10		<10		<3	Grab	ASTMD 1385		3 、	10	
	14 4	Jul-01	<10		<3	1					
	<10		<10		<3	-					
	<10		<10	May-02	8100	4	-	-	-	-	
	<10		<3		5	4					
Nov-00	<10	Aug-01	<3		<3	*					
	<10		<3		14040	-					
	361		<3	Jun-02	159	4					
	<10		<3		186	-					
Dec-00	445		<3		35	-					
	37.9		<3		<3	4 .					
	48	Sep-01	152	Jul-02	<3	4					
	<10		196		<3	4					
Jan-01	<10	ļ	<3		<3	-					
	<10	I	347	ļ	3	-					
	<10	Oct-01	266		4640	4					
	<10		341	Aug-02	<3	4					
	<10	ļ	<3	ļ	<3	-					
	<10		<3		<3 ~3	-					
Feb-01	<10		<3	0.00	<3	-					
	<10	Nov-01	<3	Sep-02	11	-					
	82	ļ	72	<u> </u>	22	-{					
	<10		<3 <3		· 8	-					
Mar-01	<10	Dec-01	<3		<3	-					
	<10	Dec-01	<3	Oct-02	<3	-{					
	<10 <10		<3	00002	<3	-	-				
1 01	19 6		<3	┼	<3		~				
Apr-01	<10	Jan-02	<3	<u> </u>	<3	-1					
	<10	Jan-02	<3	Nov-02	<3	-1					
	<10		<3	100-02	195	-					
	<10		206		15.3	-					
	<10		14		<3	-1					
May-01	<10	Feb-02	14	Dec-02	<3	1					
iviay-01	<10	1 60-02	9		<3	1		-			
	<10	+	<3		-	1					
	<10		35	1		1					
	the second s	Her 00	<3			-1					
	<10	Mar-02	and the second se			-1					
Jun-01		ļ	<3		· · · · ·						
	<10		<3	<u> </u>	<b></b>	-{					
	<10	<u> </u>	15	ļ	<u> </u>						
	<10	Apr-02	4.4			4					
	<10		<3								

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Informatio	on · 12-1	HP-6020.ADM.01	0 R	ev. 5B	Page	7 of 8
• • • •		ANALYTICAL I	RESULTS	• •	•	
Data Sheet	2	NPDES R	esults	· · ·	Page:	7
ample Identific ample Date: eceived Date/] nalysis Date_3	Time: <u>NA</u>	GRAB ALCULATIONS/RES × 1000 / (V)	Samj Rece	ple Time:_	als: <u>DU</u> <u>OS35</u> als: <u>NA</u>	CDMS Trend
ID# nalysis Time:	(Wr) - (Wi) - Equip ID.:	x 1000 / (V) Analyst's Initials:			= ppm	(S)(I)(D) Results in Spec
&G TD# nalysis Time:	$R = (W_f) - (W_i)$	(B) /(V)	···		= ppm = mg. = ppm	CDMS Trend (S)(I)(D) Results in Spec
55 55	(A) - (B) (A) - (B)	x 10007(C)		· · ·	= ppm ■ ppm	CDMS Trend (S)(I)(D) Results in Spec
D# . alysis Time:	(A) - (B) Equip ID.:	x 1000 / (C) Analyst's Initials:		*************	ppm.	-
D4 ID# nalysis Time:	(Dilution Factor) (Dilution Factor) Equip ID.:	x (Sample Reading) x (Standard Reading) Analyst's Initials:	· · ·	····	mg/L(ppm) mg/L(ppm)	CDMS Trend (S)(I)(D) Results in Spec
nalysis Time: - 0 8 니	Equip ID .	IGC     Result       Standard Temperature:     Analyst's Initials:       ISI     ISI		7.09/9	02	$\begin{array}{c} \text{CDMS Trend} \\ (S)(I)(D) \\ \text{Results in Spec} \\ \mathcal{N} / \mathcal{A} \end{array}$
nalysis Time:	Result = Equip ID.:	ppm STD#: Analyst's Initials:	Result -	ppm .		CDMS Trend (S)(I)(D) Results in Spec
Analysis	Analysis Time	Equipment ID	Results P Am	Analysts Initials	CDMS Trend	
TRC . RC STDNLSI	0900.	DR 2010-04	×.08 1.07/1.50	DU	NA	
KI STD L.C.			1.01/			Break and the second

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	Working Copy 1	
	Verified Event	
· · · · · · · · · · · · · · · · · · ·	11-11-1 DW D+ 3-26-42	

.. ; Procedure Usage Level: Information

## 12 THP 6020 ADM.010 ATTACHMENT 2

mple Identificatio	m: <u>TRAGOAD</u>		Sample H) Sample	er's Initials: e Time:	21	3
eceived Date/Time		(Y		er's Initials:		
nalysis Date	same		RUCCIV	ci 5 initiats.		
		LCULATIONS/RESU	JLTS			
DS	(W <sub>f</sub> ) - (W <sub>i</sub> )	x 1000 / (V)			= ppm .	CDMS Trend
23	("() -(")	x 10007 (*)			, pp.m	(S)(I)(D) Results in Spec
TD#	(W <sub>t</sub> ) - (W <sub>t</sub> )	x 1000 / (V)			– ppm	
nalysis Time.	Equip ID.:	Analyst's Initials.				
&G	$R = (W_f) - (W_i)$	B = (W	$(t) - (W_i)$			CDMS Trend (S)(I)(D) Results in Spec
	(R) - (	B) /(V)			= ppm	
TD#	$R = (W_f) - (W_i)$	B=(W	$(r) - (W_i)$		= mg	
	(R) - (1	B) /(V)			– ppm	
nalysis Time:	Equip ID :	Analyst's Initials				
SS	(A) •(B)	x 1000 / (C)	an an t-state to the second second		- ppm	
SS	(A) - (B)		•••••		= ppm	CDMS Trend (S)(I)(D) Results in Spec
		- 1000 / (0)				<b>•</b>
TD# Analysis Time:	(A) - (B)	x 1000 / (C) Analyst's Initials:			e ppm	{
	Equip ID.:	and a second	». • • • • • • • • • • • • • • • • • • •			CDMS Trend
504	(Dilution Factor)	x (Sample Reading)			= mg/L(ppm)	(S)(I)(D) Results in Spec
STD#	(Dilution Factor)	x (Standard Reading)			mg/L(ppm)	]
Analysis Time:	Equip ID.:	Analyst's Initials:		ويتريق والمتعرفية والمراجع		· .
РН	Sample Temperature:	Result-				CDMS Trend
STD#	Theoretical Value	Standard Temperature:	Result=			(S)(I)(D) Results m Spec
Analysis Time:	Equip ID.:	Analyst's initials:				
Total P	. Result =	ppm STD#:	Result =	ppm	مداعة معمدة مأمرم مدارية المداكر أمر	CDMS Trend
Analysis Time:	Equip ID :	Analyst's Initials:				(S)(I)(D) Results in Spec
Analysis	Analysis Time	Equipment ID	Results	Analysts Olnitials	CDMS Trend	1
TRC. 1.0 ppm si		DR-agies_	*0.02 pp	id		
1 sample			Cied pp	America	the is	
-FRE d/c	1104	TRSOLEDE AH	1 er 7,00	at at	13/39 ·	1
Comments/Con	ective Actions/Notifi	cations:				
		·····				
	* Log	For Dr 2010-	3 15	0.05	-ppn	
			<u>.</u>			

Reviewer's Initials:\_\_\_\_\_



## 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 - OOB (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	De	Sample		Sample Number	De	Sample escription	
01	OUTFALL		02/03/99	16	OUTFALL		02/03/99
02	OUTFALL		02/03/99	17	OUTFALL		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".

Certified By MATT LAKE

(937) 837-3744



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

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#### TEST RESULTS BY SAMPLE

Page 2

	Sample: 01A OUTFALL 00	OH 02/03/99	Colle	cted: (	02/03/99	Category:	AQUEOUS					
	Detection											
		Res		Limi		Units	Analyzed	By				
	Test Description		6		<u> </u>	mg/L	02/08/99	PT				
	5day CBOD, EPA 405		15		5	mg/L	02/11/99	KC				
	SUSPENDED SOLIDS, EPA 160	0.2	10		-		,,					
	Sample: 02A OUTFALL 0	0H 02/03/99	Colle	cted:	02/03/99	Category:	AQUEOUS					
				Detect	ion		÷.					
	Test Description	Res	ult	Limi	•	Units	Analyzed	By				
			BDL		5	mg/L	02/19/99	LG				
	6627		2.0		1	mg/L	02/09/99	JW				
	TOC, EPA 41	<b>D.T</b>	210		-	2.						
	Sample: 03A OUTFALL 0	OH 02/03/99	Colle	acted:	02/03/99	Category:	AQUEOUS					
				Detect	ion							
1		Pec	ult	Limi		Units	Analyzed	By				
	Test Description		BDL	0.	—	mg/L	02/11/99	JB				
	AMMONIA N, EPA 35	0.2		•••	-							
	Sample: 05A OUTFALL 0	OH 02/03/95	Coll	ected:	02/03/99	Category:	AQUEOUS					
				Detect	ion							
	Test Description	Res	Result		t	<u>Units</u>	Analyzed	By				
	EPA 625 SEMI VOL. EXTRA	•••	-			-		SD				
	EXTRACTION, EPA		-			-		SD				
	EXTRACTION, 22.											
	Sample: 06A OUTFALL 0	00H 02/03/99	) Coll	ected:	02/03/99	Category:	AQUEOUS					
	•			Detect	cion							
		· De	sult	Lim:		Units	Analyzed	By				
	Test Description ALUMINUM, EPA 20		BDL	0.0		mg/L	02/15/99	RJE				
			BDL	0.0	01	mg/L	03/05/99	RJE				
			BDL	0.0	01 .	mg/L	03/05/99	RJE				
			.019	0.0		mg/L	02/13/99	RJE				
	2		BDL	0.0		mg/L	02/13/99	RJE				
		<b>.</b>	BDL	0.	05	mg/L	02/15/99	RJE				
	201101.7		BDL	0.00		mg/L	03/08/99	RJE				
			BDL	0.		mg/L	02/13/99	RJE				
			BDL	0.		mg/L	02/15/99	RJE				
			.004	0.0		mg/L	03/08/99	RJE				
			0.3		.1	mg/L	02/13/99	RJE				
			BDL	0.0		mg/L	03/05/99	RJE				
	LEAD, EPA 2:		BDL		01	mg/L	02/15/99	RJE				
	LITHIUM, EPA 20	00.7				2.						



Order # 99-02-232 03/16/99 09:23 ĩ

#### TEST RESULTS BY SAMPLE

Page 3

				Detection			
	Test Description	1	Resu	Lt Limit	Units	Analyzed	By
	MAGNESIUM,	EPA 200.7		8 1	mg/L	02/15/99	RJE
	MANGANESE,	EPA 200.7	0.0	0.01	mg/L	02/13/99	RJE
	MERCURY,	EPA 245.1	BI	DL 0.0002	mg/L	02/15/99	RJE
	METALS DIGESTION	WATER		-			EP
	MOLYBDENUM,	EPA 200.7	BI	DL 0.01	mg/L	02/13/99	RJE
	NICKEL,	EPA 249.2	BI	DL 0.005	mg/L	03/08/99	RJE
	SELENIUM,	EPA 200.7	BI	DL 0.1	mg/L	02/13/99	RJE
	SILVER,	EPA 272.2	BI	DL 0.0005	mg/L	03/08/99	RJE
	STRONTIUM,	EPA 200.7	0.0	0.01	mg/L	02/15/99	RJE
	THALLIUM,	EPA 279.2	BI	DL 0.001	mg/L	03/08/99	RJE
	URANIUM	EPA 200.7	BI	DL 0.1	mg/L	02/15/99	RJE
	ZINC,	EPA 200.7	BI	DL 0.02	mg/L	02/13/99	RJE
	Sample: 07A OU	TFALL OOH	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
}				Detection		•	
	Test Description		Resu		Units	Analyzed	By
	SULFIDE,	EPA 376.1		DL 1	mg/L	03/05/99	LG
	TOTAL CYANIDE,	EPA 335.2	B	DL 0.01	mg/L	03/04/99	LG
	Sample: 08A OU	TFALL OOH	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
				. Detection			
	Test Description		Resu		Units	Analyzed	By
	PHENOLICS,	EPA 420.1	0.		mg/L	02/23/99	JB
	·····				2.		
	Sample: 09A OU	TFALL OOH	02/03/99	Collected: 02/03/99	Category:	AQUEOUS	
	Sample: 09A OU	TFALL OOH	02/03/99		Category:	AQUEOUS	
	-			Detection		~	Bv
	- Test Description		Resu	Detection lt Limit	Units	Analyzed	<u>By</u> ML
	-		Resu	Detection		~	<u>By</u> ML
	Test Description CHLORINE, RESIDU		<u>Resu</u> B	Detection lt Limit	<u>Units</u> mg/L	<u>Analyzed</u> 02/04/99	
	Test Description CHLORINE, RESIDU	AL TOTAL	<u>Resu</u> B 02/03/99	Detection <u>Lt Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u>	<u>Units</u> mg/L Category:	Analyzed 02/04/99 AQUEOUS	
	Test Description CHLORINE, RESIDU	AL TOTAL TFALL 00H	<u>Resu</u> B 02/03/99 <u>Resu</u>	Detection <u>Lt Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u> <u>Limit</u>	Units mg/L Category: Units	Analyzed 02/04/99 AQUEOUS Analyzed	ML
	Test Description CHLORINE, RESIDU Sample: 10A OU	AL TOTAL TFALL 00H	<u>Resu</u> B 02/03/99	Detection <u>Lt Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u> <u>1t Limit</u> 36 0.2	<u>Units</u> mg/L Category: <u>Units</u> mg/L	Analyzed 02/04/99 AQUEOUS Analyzed 02/05/99	ML By LG
	Test Description CHLORINE, RESIDU Sample: 10A OU Test Description NITRATE-NITRITE ORGANIC NITROGEN	AL TOTAL TFALL 00H N	<u>Resu</u> B 02/03/99 <u>Resu</u> 0. B	Detection <u>Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u> <u>Limit</u> 36 0.2 DL 0.5	<u>Units</u> mg/L Category: <u>Units</u> mg/L mg/L	<u>Analyzed</u> 02/04/99 AQUEOUS <u>Analyzed</u> 02/05/99 02/11/99	ML By LG JB
	Test Description CHLORINE, RESIDU Sample: 10A OU Test Description NITRATE-NITRITE	AL TOTAL TFALL 00H N	<u>Resu</u> B 02/03/99 <u>Resu</u> 0. B	Detection <u>Lt Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u> <u>1t Limit</u> 36 0.2	Units mg/L Category: Units mg/L mg/L mg/L	<u>Analyzed</u> 02/04/99 AQUEOUS <u>Analyzed</u> 02/05/99 02/11/99 02/18/99	ML By LG JB LG
	Test Description CHLORINE, RESIDU Sample: 10A OU Test Description NITRATE-NITRITE ORGANIC NITROGEN	AL TOTAL T <b>FALL 00H</b> N	<u>Resu</u> B 02/03/99 <u>Resu</u> 0. B	Detection <u>Lt Limit</u> DL 0.05 Collected: 02/03/99 <u>Detection</u> <u>Limit</u> 36 0.2 DL 0.5 DL 0.1	<u>Units</u> mg/L Category: <u>Units</u> mg/L mg/L	<u>Analyzed</u> 02/04/99 AQUEOUS <u>Analyzed</u> 02/05/99 02/11/99 02/18/99	ML By LG JB

(937) 837-3744



Order # 99-02-232 TEST RESULTS BY SAMPLE 03/16/99 09:23 02/03/99 Collected: 02/03/99 Category: AQUEOUS OUTFALL 00H Sample: 11A Detection

Result

Result

BDL

BDL

BDL

BDL

BDL

Test Description OIL & GREASE, EPA 413.1

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Sample: 12A OUTFALL 00H

Test Description	I
GROSS ALPHA,	IN WATER
GROSS BETA,	IN WATER
RADIUM,	IN WATER
RADIUM-226,	IN WATER

OUTFALL 00H Sample: 13A

02/03/99 Collected: 02/03/99 Category: AQUEOUS

Limit

Detection

<u>Limit</u>

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5

02/03/99 Collected: 02/03/99 Category: AQUEOUS

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

Sample: 14A OUTFALL 00H

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

OUTFALL 00B Sample: 16A

02/03/99 Collected: 02/03/99 Category: AQUEOUS

02/03/99 Collected: 02/03/99 Category: AQUEOUS

	Dete	<u>ction</u>			
Test Description	Result Li	nit .		Analyzed	
5day CBOD, EPA 405.1	82	2		02/08/99	
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	

Sample: 17A OUTFALL 00B

			Detection			
Test_Description	1	Result	Limit		<u>Analyzed</u>	
COD,	- EPA 410.4	331	20	<b>.</b>	02/19/99	
TOC,	EPA 415.1	19.9	1	mg/L	02/09/99	ΜĽ

(937) 837-3744

Page 4

Units Analyzed

mg/L 02/04/99

Units Analyzed

pCi/L 03/08/99

pCi/L 03/08/99

pCi/L 03/10/99

pCi/L 03/10/99

By

 $\mathbf{PT}$ 

By

SF

SF

SF

SF



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

#### TEST RESULTS BY SAMPLE

Page 5

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

2 .

Test Description	Result	Detection Limit	Units	Analyzed	Bv
AMMONIA N, EPA 350		0.5		02/12/99	
Sample: 20A OUTFALL 00	B 02/03/99 Co	ollected: 02/03/99	Category:	AQUEOUS	

			Detection			
Test Description		Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
EPA 625 SEMI VOL.	EXTRACT	-		-		SD
EXTRACTION,	EPA 608	-		-		SD

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

					Detection			
	Test Description			Result	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	<u>By</u>
)	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	l	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



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			-		ه	Page 6	
Order # 99-02-232	7	TEST RESULTS BY SAMPLE					
03/16/99 09:23		_1631_KB30					
				•			
			•				
Sample: 22A OUTFALI	. 00B	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS	
Sampie: 12A Collins		• •					
			Dete	ction			
Test Description		Resu	lt Li	<u>mit</u>		<u>Analyzed</u>	By
	376.1	-	14	1		03/05/99	$\mathbf{LG}$
	335.2	B	DL 0	.01	mg/L	03/04/99	LG
1011111 0111102; 200							
Sample: 23A OUTFAL	L 00B	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS	
				<u>ction</u>	1.		The s
Test Description		Resu		mit		Analyzed	By
	420.1	В	DL 0	.01	mg/L	02/23/99	JB
					<b>a</b>	) OTTROTTC	
Sample: 24A OUTFAL	L 00B	02/03/99	Collected	: 02/03/99	Category:	AQUEOUS	
		_		<u>ction</u>	IInite	Analyzed	By
<u>Test Description</u>		Resu		mit	mg/L	02/04/99	ML
CHLORINE, RESIDUAL T	OTAL	E	DL C	.05	iiig/ II	02/04/00	
		00/00/00	Gellested	. 02/03/99	Category:	AOUEOUS	
Sample: 25A OUTFAL	L 00B	02/03/99	COTTECTED	. 02/00/00		~~~~	
			Dete	ection			
		Resu		mit	Units	Analyzed	By
Test Description			BDL	0.2		02/05/99	
NITRATE-NITRITE N			.3	0.5		02/06/99	
ORGANIC NITROGEN	A 365.1		BDL	0.1	mg/L		
	A 351.3		3.7	0.5	mg/L		JB
TKN, EPP	331.3				-		
Sample: 26A OUTFAI	T. 00B	02/03/99	Collecte	1: 02/03/99	Category	AQUEOUS	
Sample: 26A OUTFAI							
			Det	ection			
Test Description		Rest	ult L	<u>imit</u>	<u>Units</u>		<u>By</u>
	A 413.1	]	BDL	5 ·	mg/L	02/04/99	PT
Sample: 27A OUTFAL	LL 00B	02/03/99	Collecte	d: 02/03/99	Category	: AQUEOUS	
				ection	•.	<b>n</b>	<b>n</b>
Test_Description		Res		imit	<u>Units</u>		
	N WATER	:	BDL	3	pCi/L		
	N WATER		BDL	4	pCi/L	03/08/99	
	N WATER		BDL	1		03/10/99	
	N WATER		BDL	1	pCi/L	03/10/99	51
-							



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Order # 99-02-232				Page 7
03/16/99 09:23	TE	T RESULTS BY	SAMPLE	

Sample: 28A OUTFALL 00B 02/03/9

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02/03/99 Collected: 02/03/99 Category: AQUEOUS

		Detection			
Test Description	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>Analyzed</u>	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 Colle	acted: 02/03/99	Category:	AQUEOUS	
		Detection	•• · · · ·		_

Test Description	Result	Limit		<u>Units</u>	<u>Analyzed</u>	By
ASBESTOS WATER	ND	0.2	MF/L,	>10um	02/12/99	ΕM



## Belmonte Park Environmental ories

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

#### TEST RESULTS BY SAMPLE

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

02/03/99 Lab No: 04A Method: 624 Category: AQUEOUS

Test Code: 624\_X

Page 8

PARAMETER

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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	<u>)</u>
SURROGATE %RECO	OVERY	LIMITS	
D4-1,2 DICHLOROETHANE	L <u>14</u>	<u> </u>	114
D8-TOLUENE	93	88 -	.110

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

#### TEST RESULTS BY SAMPLE

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

Test Code: 624\_X

4-BROMOFLUOROBENZENE 95 86 - 115

Notes and Definitions for this Report:

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



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

#### TEST RESULTS BY SAMPLE

Page 10

Sample Description: OUTFALL 00H02/03/99Lab No: 05ATest Description: EPA 625 SEMI VOLATILESMethod: 625Collected: 02/03/99Category: AQUEOUS

• Test Code: 625\_AE

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

#### TEST RESULTS BY SAMPLE

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Sample Description: OUTFALL 00H Test Description: EPA 625 SEMI VOLATILES Method: 625 Collected: 02/03/99

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02/03/99 Lab No: 05A Category: AQUEOUS

Test Code: 625\_AE

BUTYL BENZYLPHTHALATE	BDL	<u> </u>
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	1.0
ANTHRACENE	BDL	10
BENZO (GHI) PERYLENE	BDL	50
FLUORENE	BDL	10
PHENANTHRENE	BDL	<u>    10</u>
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	<b>%RECOVERY</b>	LIMITS	
NITROBENZENE-d5	88	<u> </u>	114
2-FLUOROBIPHENYL	<u> </u>	43 -	<u>    116</u>
p-TERPHENYL-d14	90	<u> </u>	141
- PHENOL-d6	38	<u>    10</u> -	94
2-FLUOROPHENOL	32	<u> </u>	100
2,4,6-TRIBROMOPHENOL	36	<u>    10</u> -	123

Notes and Definitions for this Report:

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



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

#### TEST RESULTS BY SAMPLE

Page 12

Sample Description: OUTFALL 00H Test Description: PCB/PESTICIDES EPA 608

Collected: 02/03/99

02/03/99 Lab No: 05A Method: 608 Category: AQUEOUS

Test Code: 608

PARAMETER	RESULT	LIMIT
PARAMETER ALDRIN ALPHA-BHC BETA-BHC DELTA-BHC GAMMA-BHC CHLORDANE 4,4-DDT 4,4-DDT 4,4-DDD DIELDRIN ALPHA ENDOSULFAN BETA ENDOSULFAN BETA ENDOSULFAN ENDOSULFAN SULFATE ENDRIN ENDRIN ALDEHYDE HEPTACHLOR HEPTACHLOR EPOXIDE PCB-1016	BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL	$\begin{array}{c} 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.010\\ 0.10\\ 0.020\\ 0.030\\ 0.10\\ 1\end{array}$
PCB-1016 PCB-1221	BDL	2
PCB-1232 PCB-1242	BDL BDL BDI	1
PCB-1248 PCB-1254 PCB-1260	BDL BDL BDL	1
PCB-1260 TOXAPHENE	BDL	

SURROGATE	<b>%RECOVERY</b>	LIMITS
DBC (SURROGATE, & RECOVERY)	9 <u>0</u> .	<u> </u>
2,4,5,6-TCX (SURROGATE & REC.)	94	<u>    70</u> - <u>   130</u>

## Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 ANALYST JW INSTRUMENT GC FILE ID A020942 UNITS <u>uq/L</u>

11 East Main Street

(937) 837-3744



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Order	#	99.	-02	-232
03/16/	<b>'</b> 99	09	9:2	3

#### TEST\_RESULTS\_BY\_SAMPLE

Sample Description: OUTFALL 00H 02/03 Test Description: PCB/PESTICIDES EPA 608 Collected: 02/03/99

02/03/99 Lab No: 05A A 608 Method: 608 Category: AQUEOUS

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Test Code: 608

METHOD <u>EPA 608</u> BDL <u>BELOW DETECTION LIMIT</u>

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#### TEST RESULTS BY SAMPLE

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

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 TRICRESYL PHOSPHATE	ESTER ESTER	BDL BDL	<u> </u>
SURROGATE NITROBENZENE-D5 2-FLUOROBIPHENYL p-TERPHENYL-d14 PHENOL-d6 2-FLUOROPHENOL 2,4,6-TRIBROMOPHENOL	*RECOVE 105 120 ( 125 40 150 (		LIMITS <u>35</u> - <u>114</u> <u>43</u> - <u>116</u> <u>33</u> - <u>141</u> <u>10</u> - <u>94</u> <u>21</u> - <u>100</u> <u>10</u> - <u>123</u>

Notes and Definitions for this Report:

EXTRACTED 02/08/99
DATE RUN <u>02/11/99</u>
ANALYST <u>JAT</u>
INSTRUMENT SATURN
FILE ID0206505W
UNITS ug/L
METHOD 8270
BDL BELOW DETECTION LIMIT



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

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Test Code: 624\_X

#### PARAMETER

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RESULT

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 %RE	COVERY	LIMITS
D4-1,2 DICHLOROETHANE	112	
D8-TOLUENE	93	88 -

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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

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4-BROMOFLUOROBENZENE

Notes and Definitions for this Report:

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

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PARAMETER

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

#### TEST RESULTS BY SAMPLE

RESULT

LIMIT

Sample Description: OUTFALL 00B02/03/99Lab No: 20ATest Description: EPA 625 SEMI VOLATILESMethod: 625Collected: 02/03/99Category: AQUEOUS

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Test Code: 625\_AE

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
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Order # 99-02-232 03/16/99 09:23 TEST RESULTS		age 18
Sample Description: OUTFALL 00B 02/03/3 Test Description: EPA 625 SEMI VOLATILES Collected: 02/03/99		Code: 625_AE
BUTYL BENZYLPHTHALATE	BDL 10	

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

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Notes and Definitions for this Report:

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

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

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PARAMETER

#### TEST RESULTS BY SAMPLE

RESULT

LIMIT

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

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Test Code: 608

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	<u> </u>
PCB-1260	BDL	1
TOXAPHENE	BDL	0.20

SURROGATE	<b>%RECOVERY</b>	LIMITS
DBC (SURROGATE, % RECOVERY)	93	<u> </u>
2,4,5,6-TCX(SURROGATE % REC.)	95	<u> </u>

#### Notes and Definitions for this Report:

EXTRACTED 02/06/99 DATE RUN 02/09/99 ANALYST \_JW INSTRUMENT \_\_GC FILE ID <u>A020943</u> UNITS \_\_Uq/L

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

#### TEST RESULTS BY SAMPLE

Sample Description: OUTFALL 00B

Test Description: PCB/PESTICIDES EPA 608 Collected: 02/03/99

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02/03/99 Lab No: 20A Method: 608 Category: AQUEOUS

Test Code: 608

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METHOD EPA 608 BDL BELOW DETECTION LIMIT



Order # 99-02-232

03/16/99 09:23

oratories

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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 TRICRESYL PHOSPHATE		BDL BDL		<u>5</u>
SURROGATE	<b>%</b> RECOVI	ERY	LIMITS	
NITROBENZENE-D5	80	<u>)</u>	35 -	114
2-FLUOROBIPHENYL	80	<u>)</u>	43 -	116
p-TERPHENYL-d14	7	3	33 -	141
PHENOL-d6	1(	<u> </u>	10 -	94
2-FLUOROPHENOL	4 (	2	21 -	100
2,4,6-TRIBROMOPHENOL	4 (	2 _	10 -	123

Notes and Definitions for this Report:

EXTRACTED	<u>02/08/99</u>
DATE RUN	02/11/99
ANALYST	MN
INSTRUMENT	SATURN
FILE ID	0206502W
UNITS uq	<u>/L</u>
METHOD	8270
BDL BELO	W 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:

<u>Strontium</u> was detected in Outfall 00H (Turbine Room Sump). There are <u>no plant</u> <u>processes</u> that use strontium. Strontium is a trace element (21<sup>st</sup> 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.

<u>Copper</u> 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

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B. Outfall Information

		PLEASE TYPE OR PRINT	· · · ·	at the state
FAC	CILIT	YNAME	NPDES PERMIT NUMBER	OUTFALL NUMBER
		Donald C. Cook Nuclear Plant	MI0005827	00H
9.	Wa	TER TREATMENT ADDITIVES ter treatment additives include any matenal that is added to water u it the water.	sed at the facility or to a wastewater generated by	the facility to condition or
		provals of water treatment additives are authonzed by the DEQ und stitute approval of the water treatment additives that are included in t		NPDES permit does not
	А	Are there water treatment additives in the discharge from this facility?	?	
	$\square$	No, proceed to item 4. Yes		
	в	Have these water treatment additives been previously approved?		
		No, continue with C below		
		Yes. Submit a list of the previously approved water treatment additi updated if it has changed since the previous approval.	ves and the date they were approved The informal	tion listed in C. 1-8 must be
		Submit a list of water treatment additives that are or may be discharg additive.	ed from the facility Applicants must submit the info	ormation listed below for each
	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		Ϋ́,
	5	The type of removal treatment, if any, that the water treatment add	tive receives prior to discharge.	ſ
	6	The water treatment additive function (i e , microbiocide, flocculant,	etc.)	
	7.	A 48-hour LC50 or EC50 for a North American freshwater planktoni	c crustacean (either Ceriodaphnia sp , Daphnia sp ,	, or Simocephalus sp )
	8.	The results of a toxicity test for one other North American freshwate requirement of Rule 323.1057(2)(a) of the Water Quality Standards a rainbow trout, bluegill, or fathead minnow.		
	on	required toxicity information (described in items 7 and 8 above) is of the DEQ's Internet page http://www.deq.state.mi.us/swq/gleas/c tives on this list, only the information in items 1 through 6 above nee	locs/wta/WTAlist.doc If you intend to use one	
	Not	e: The availability of toxicity information for a water treatment additive	e does not constitute approval to discharge the wate	er treatment additive.
10.	WF	IOLE EFFLUENT TOXICITY TESTS		
	Hav If ye	e any acute or chronic WET tests been conducted on any discharges, identify the tests and summanze the results below unless the test	s or receiving water in relation to facility discharges has been submitted to the department in the last 5 to	within the last three years? years.
NO				

## Michigan Department of Environmental Quality-Surface Water Quality Division WASTEWATER DISCHARGE PERMIT APPLICATION SECTION III - Industrial and Commercial Wastewater

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B. Outfall Information

#### PLEASE TYPE OR PRINT

FACILITY NAME	NPDES or COC PERMIT NUMBER	Outfail Number
Donald C. Cook Nuclear Plant	MI0005827	00H
WATER TREATMENT ADDITIVES		
Water Treatment Additive	Approval Date	)
Hydrochloric Acid (pH control)	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	5/23/00
Sulfuric Acid	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	25/96 approval
Sodium Hydroxide	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	5/23/00
Sodium Bisulfite	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	5/23/00
Citric Acid	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	5/23/00
Phosphoric Acid	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	5/23/00
Tide Detergent or equivalent	11/14/96 change of process application, 11/ NPDES Permit application approval 9/28/00,	25/96 approval , 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, NPD	ES Permit approval 9/28/95
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# Section III.C

## Michigan Department of Environmental Quality- Water Division WASTEWATER DISCHARGE PERMIT APPLICATION SECTION III - Industrial and Commercial Wastewater

C. Signature Page

LEA	SE TYPE OR PE			
TACI	LITY NAME		NPDES PERMIT	NUMBER
Dona	d C. Cook Nucle	ar Plant	MI0005827	
	CERTIFICATION Rule 323 2114(1-		Act, requires that this application be s	gned as follows:
	responsible f B. For a partner C. For a sole pro	or the overall operation of the facility ship, by a general partner. oprietorship, by the proprietor.	$\gamma$ from which the discharge described in	or their designated representative if the representative is in the permit application or other NPDES form originates. mayor, village president, city or village manager or other
		ed employee.		
	Note: If the sian	atory is not listed above, but is autho	prized to sign the application, please p	ovide documentation of that authorization.
	designed to assu who manage th knowledge and i	enalty of law that this document and ure that qualified personnel properly e system, or those persons direct	d all attachments were prepared under gather and evaluate the information s ly responsible for gathering the infor J am aware that there are significan	my direction or supervision in accordance with a system ubmitted Based on my inquiry of the person or persons nation, the information submitted is, to the best of my t penalties for submitting false information, including the
	designed to assu who manage th knowledge and i	enalty of law that this document and ure that qualified personnel properly e system, or those persons directi belief, true, accurate, and complete	d all attachments were prepared under gather and evaluate the information s ly responsible for gathering the infor J am aware that there are significan	my direction or supervision in accordance with a system ubmitted Based on my inquiry of the person or persons nation, the information submitted is, to the best of my t penalties for submitting false information, including the
	designed to assu who manage th knowledge and i possibility of fine	enalty of law that this document and ure that qualified personnel properly e system, or those persons direct belief, true, accurate, and complete and imprisonment for having know	d all attachments were prepared under gather and evaluate the information s ly responsible for gathering the infor I am aware that there are significan ledge of violations."	my direction or supervision in accordance with a system ubmitted Based on my inquiry of the person or persons nation, the information submitted is, to the best of my t penalties for submitting false information, including the

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.