



JAN 3 1 2011

SERIAL: HNP-11-014

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/RENEWED LICENSE NO. NPF-63
NOTIFICATION OF NPDES PERMIT RENEWAL APPLICATION

Ladies and Gentlemen:

In accordance with Section 3.2 of the Environmental Protection Plan (Nonradiological) issued as Appendix B to Facility Operating License No. NPF-63 for the Harris Nuclear Plant, Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., is providing a copy of the application for renewal of the facility's National Pollutant Discharge Elimination System (NPDES) Permit # NC0039586. The application, dated January 26, 2011, has been forwarded to the North Carolina Department of Environment and Natural Resources. The current permit expiration date is July 31, 2011.

If you have any questions regarding this submittal please contact me at (919) 362-3137.

Sincerely,

A handwritten signature in black ink that reads 'John R. Caves'.

J. R. Caves
Supervisor, Licensing/Regulatory Programs
Harris Nuclear Plant

JRC/mgw

Enclosure

c: Mr. J. D. Austin (NRC Senior Resident Inspector, HNP)
Mrs. B. L. Mozafari (NRC Project Manager, HNP)
Mr. V. M. McCree (NRC Regional Administrator, Region II)

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

COOL
NRR



JAN 26 2011

SERIAL: HNP-11-009

Mr. Jeffrey O. Poupart
North Carolina Department of Environment and Natural Resources
Division of Water Quality
1617 Mail Service Center
Raleigh, NC 27699-1617

Subject: Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc.
Harris Nuclear Plant
NPDES Permit No. NC0039586
Re-issuance Application

Dear Mr. Poupart:

The current NPDES permit for the Harris Nuclear Plant located in Wake County expires on July 31, 2011. Progress Energy Carolinas, Inc. (PEC) hereby requests that the NPDES permit for the facility be reissued. Attached is EPA Application Form 1 – General Information, EPA Application Form 2C – Wastewater Discharge Information, and EPA Form 2F – Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity, all in triplicate.

Please note that PEC has not been able to complete the storm water sampling required by EPA Form 2F. A contractor has been retained to complete the sampling for the representative storm water outfalls, however the sampling has not been completed. We expect the sampling will take place during the next qualifying rain event, provided the contractor can safely sample outfalls during the storm event. The analytical results will be submitted to DWQ as soon as possible.

Also note that a sludge management plan is not included with the submittal because PEC has a contractor that takes the sludge offsite and land applies it under its own land application permit (Attachment 4).

With re-issuance of the NPDES permit, PEC requests the following:

- Eliminate the chromium and zinc monitoring requirement from Outfall 001 and add them to Outfall 006. PEC believes this would be more consistent with the current required metals monitoring at Outfall 006 and would give a better indication of the actual discharge of these two metals to surface waters, if they were measured at Outfall 006.
- Eliminate the ammonia monitoring requirement for Outfall 002. The current permit requires ammonia monitoring at Outfall 006, the discharge to surface waters, and at internal Outfall 002. PEC does not see the need to continue monitoring ammonia at both the internal and external outfall locations.

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
P. O. Box 165
New Hill, NC 27562

- Change the Total Suspended Residue monitoring requirement at Outfall 007 to a Total Suspended Solids monitoring requirement with a Daily Max limit of 100 mg/l. This would make the monitoring requirement consistent with the Total Suspended Solids monitoring requirement at Outfall 004 and Outfall 005.
- Combine the Biological Oxygen Demand monitoring requirement for Outfall 007 into one requirement with limits of 30 mg/L monthly average and 45 mg/L daily max. Currently, the requirement has different limits based on the time of year.
- Add the following condition to the renewed NPDES permit, replacing the current Biocide Condition located in Part II, 1. The purpose of this condition is to formally recognize the guidance and understanding we have received from the Division in the past, and to allow this permit to be consistent with other recently reissued permits.

"1. Biocide Condition

The permittee shall not discharge any biocides that have not been previously approved in conjunction with the permit application. For biocides not previously approved by the Division of Water Quality, the permittee shall notify the Director in writing prior to use of these biocides. Completion of Biocide Worksheet Form 101 is not necessary for those outfalls with toxicity testing requirements."

With regard to Section 316(b), of the Clean Water Act, PEC has not made any changes to the existing cooling water intake structure that would change the status of compliance with current 316(b) regulations. Once a new rule is promulgated by the EPA, PEC will evaluate the rule and its effects on the status of compliance of the existing cooling water intake structure.

If there are any questions regarding this request and/or the attached information, please contact Steve Cahoon at (919) 546-7457.

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Sincerely,



Kelvin Henderson
Plant General Manager
Harris Nuclear Plant

KH/mgw

Attachments

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		I. EPA I.D. NUMBER	
LABEL ITEMS		PLEASE PLACE LABEL IN THIS SPACE		GENERAL INSTRUCTIONS	
I. EPA I.D. NUMBER				If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.	
III. FACILITY NAME					
V. FACILITY MAILING ADDRESS					
VI. FACILITY LOCATION					
II. POLLUTANT CHARACTERISTICS					
INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.					
SPECIFIC QUESTIONS		Mark "X"		SPECIFIC QUESTIONS	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		YES	NO	FORM ATTACHED	
			X		
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)			X		
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)			X		
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X		
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)			X		
D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)			X		
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)			X		
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)			X		
J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X		
III. NAME OF FACILITY					
1 SKIP Harris Nuclear Plant and Harris Energy and Environmental Center					
IV. FACILITY CONTACT					
A. NAME & TITLE (last, first, & title)					
2 Henderson, Kelvin - Plant General Manager					
B. PHONE (area code & no.)					
919 362-2000					
V. FACILITY MAILING ADDRESS					
A. STREET OR P.O. BOX					
3 5413 Shearon Harris Road					
B. CITY OR TOWN					
4 New Hill					
C. STATE					
NC					
D. ZIP CODE					
27562					
VI. FACILITY LOCATION					
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER					
5 5413 Shearon Harris Road					
B. COUNTY NAME					
Wake					
C. CITY OR TOWN					
6 New Hill					
D. STATE					
NC					
E. ZIP CODE					
27562					
F. COUNTY CODE (if known)					

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VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
C	7	4	911	(specify)	C	7	(specify)
15	16	17	18	19	15	16	19
Electric Power Service							
C. THIRD				D. FOURTH			
C	7	(specify)	C	7	(specify)		
15	16	19	15	16	19		

VIII. OPERATOR INFORMATION

A. NAME				B. Is the name listed in Item VIII-A also the owner?			
C	8	Carolina Power and Light Company d/b/a Progress Energy Carolinas, Inc				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
15	16					55	56

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)				D. PHONE (area code & no.)			
F = FEDERAL	M = PUBLIC (other than federal or state)	P	(specify)	C	9	19	362 - 2000
S = STATE	O = OTHER (specify)	56	Public Utility	A	15	16	19 - 21 22 - 25
P = PRIVATE							

E. STREET OR P.O. BOX			
P. O. Box 1551			
26	55		

F. CITY OR TOWN				G. STATE	H. ZIP CODE	IX. INDIAN LAND	
C	B	Raleigh		NC	27602	Is the facility located on Indian lands?	
15	16			40	41	42	47 - 51
						<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)			
C	T	I		C	T	I	
9	N		See Attachment 1	9	P		
15	16	17	18	15	16	17	18
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)			
C	T	I		C	T	I	
9	U			9			(specify)
15	16	17	18	15	16	17	18
C. RCRA (Hazardous Wastes)				E. OTHER (specify)			
C	T	I		C	T	I	
9	R			9			(specify)
15	16	17	18	15	16	17	18

XI. MAP


Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

The Harris Nuclear Plant (HNP) consists of a 900 megawatt generating unit and associated facilities. The Harris Energy and Environmental Center (HEEC) includes facilities that provide support services (laboratories and training) for the HNP and other Progress Energy Facilities.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the 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.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Kelvin Henderson Plant General Manager		1/26/11

COMMENTS FOR OFFICIAL USE ONLY

C															
15	16														55

EPA I.D. NUMBER (copy from Item 1 of Form 1)

NCD991278284

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

Please print or type in the unshaded areas only.

FORM 2C NPDES		U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS Consolidated Permits Program					
I. OUTFALL LOCATION							
For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.							
A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
006	35	34	47	78	58	07	Harris Reservoir
007	35	38	05	78	55	05	Harris Reservoir
II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES							
A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.							
B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.							
1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT				
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION		b. LIST CODES FROM TABLE 2C-1		
006	Combined Outfall	See Attachment 3	Discharge to surface water		4-A		
	Internal Outfall 001						
	Cooling Tower Blowdown	See Attachment 3	Dechlorination		2-E		
	Internal Outfall 002						
	Sanitary Waste Treatment Plant	See Attachment 3	Activated Sludge, Disinfection		3-A	2-F	
	Internal Outfall 003						
	Metal Cleaning Waste	See Attachment 3	Neutralization, Sedimentation		2-K	1-U	
	Internal Outfall 004						
	Low volume Waste	See Attachment 3	Neutralization, Sedimentation		2-K	1-U	
	Internal Outfall 005						
	Radwaste System	See Attachment 3	Multimedia Filtration, Ion Exchange		1-Q	2-J	
007	Harris Energy and Environmental	See Attachment 3	Aerated Lagoons, Disinfection		3-B	2-F	
	Center Waste Water Treatment Plant		Dechlorination		2-E		
OFFICIAL USE ONLY (effluent guidelines sub-categories)							

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C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ YES (complete the following table)☐ NO (go to Section III)

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(s) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK <i>(specify average)</i>	b. MONTHS PER YEAR <i>(specify average)</i>	a. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		C. DURATION <i>(in days)</i>
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
Internal Outfall 005	Radwaste System	1 to 2	12	0.021	0.021	0.0105	0.0105	0.5

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ YES (complete Item III-B)☐ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III-C)☒ NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (complete the following table)☒ NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Asbestos	Insulation		
Strontium, Uranium, Vanadium, Zirconium	Trace elements occasionally present in oil used to fuel auxiliary boilers		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☒ YES (list all such pollutants below)

☐ NO (go to Item VI-B)

Although not added or produced, the following elements could be potentially be present in the discharge due to normal pipe erosion/corrosion.

Copper
Iron
Silver
Nickel
Zinc

The following elements could be present in oil, which is used to fuel Auxillary boilers:

Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc

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VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ YES (identify the test(s) and describe their purposes below)

☐ NO (go to Section VIII)

Outfall 006 - Acute 24 - hour test using Fathead Minnows have been conducted quarterly during this permit cycle.

Outfall 007 - Acute 24 - hour test using Fathead Minnows have been conducted quarterly during most of the permit cycle. Beginning in June of 2010 toxicity samples were taken monthly when there was a discharge of the radiological waste tank to Outfall 007.

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?


☒ YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☐ NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Environmental Conservation Laboratories, Inc.	102-A Woodwinds Industrial Ct Cary NC 27511	(919) 497-3090	All pollutants except those listed below.
GEL Laboratories, LLC	2040 Savage Rd Charleston SC 29407	(843) 556-8171	Alpha, Beta, Sulfite
Harris Plant Environmental Laboratory	5313 Shearon Harris Road New Hill NC 27562	(919) 362-2444	pH, temperature, TSS, Ammonia, Nitrogen, phosphorus, iron, copper

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)	B. PHONE NO. (area code & no.)
Kelvin Henderson - Plant General Manager	(919) 362 - 2000
C. SIGNATURE	D. DATE SIGNED
	1/26/11

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
NC991278284

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)		OUTFALL NO. 006
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PART A—You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
	CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS				CONCENTRATION	MASS	
a. Biochemical Oxygen Demand (BOD)	2.5	50.1					1	mg/l	kg/day			
b. Chemical Oxygen Demand (COD)	46	921.0					1	mg/l	kg/day			
c. Total Organic Carbon (TOC)	15	300.3					1	mg/l	kg/day			
d. Total Suspended Solids (TSS)	13.4	268.3					13	mg/l	kg/day			
e. Ammonia (as N)	0.55	11.0					13	mg/l	kg/day			
f. Flow	VALUE 10.62		VALUE 8.07		VALUE 5.29		365	MGD	~	VALUE		
g. Temperature (winter)	VALUE 20.8		VALUE 18.4		VALUE 13.8		21	°C		VALUE		
h. Temperature (summer)	VALUE 34.2		VALUE 32.2		VALUE 26.9		31	°C		VALUE		
i. pH	MINIMUM 7.0	MAXIMUM 7.5	MINIMUM 7.0	MAXIMUM 7.5			13	STANDARD UNITS				

PART B — Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a.	b.	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	BELIEVED PRESENT	BELIEVED ABSENT	(1)	(2)	(1)	(2)	(1)	(2)				(1)	(2)	
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS				CONCENTRATION	MASS	
a. Bromide (24959-67-9)		X	<0.5	~					1	mg/l	~			
b. Chlorine, Total Residual		X	<0.1	~					1	mg/l	~			
c. Color	X		25	~					1	CU	~			
d. Fecal Coliform	X		<1	~					1	cu/100ml	~			
e. Fluoride (16984-48-8)	X		0.32	6.4					1	mg/l	kg/dy			
f. Nitrate-Nitrite (as N)	X		0.21	4.2					8	mg/l	kg/dy			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		1.22	24.4					8	mg/l	kg/dy			
h. Oil and Grease		X	<3	~					1	mg/l	~			
i. Phosphorus (as P), Total (7723-14-0)	X		0.70	14.0					13	mg/l	kg/dy			
j. Radioactivity														
(1) Alpha, Total		X	<5.0	~					1	pCi/l	~			
(2) Beta, Total	X		5.48	1.09e ⁻¹⁰					1	pCi/l	cu/dy			
(3) Radium, Total			Testing	and	Reporting	not	Required							
(4) Radium 226, Total			Testing	and	Reporting	not	Required							
k. Sulfate (as SO ₄) (14808-79-8)	X		23	460.5					1	mg/l	kg/dy			
l. Sulfide (as S)		X	<0.1	~					1	mg/l	~			
m. Sulfite (as SO ₃) (14265-45-3)		X	<0.5	~					1	mg/l	~			
n. Surfactants		X	<0.1	~					1	mg/l	~			
o. Aluminum, Total (7429-90-5)	X		313	6.2					1	ug/l	kg/dy			
p. Barium, Total (7440-39-3)	X		27.7	0.5					1	ug/l	kg/dy			
q. Boron, Total (7440-42-8)	X		145	2.9					1	ug/l	kg/dy			
r. Cobalt, Total (7440-48-4)		X	<10	~					1	ug/l	~			
s. Iron, Total (7439-89-6)	X		555.1	11.1					13	ug/l	kg/dy			
t. Magnesium, Total (7439-95-4)	X		5.15	103.1					1	mg/l	kg/dy			
u. Molybdenum, Total (7439-98-7)		X	<10	~					1	ug/l	~			
v. Manganese, Total (7439-96-5)	X		515.3	10.3					25	ug/l	kg/dy			
w. Tin, Total (7440-31-5)		X	<10	~					1	ug/l	~			
x. Titanium, Total (7440-32-6)		X	<5.00	~					1	ug/l	~			

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
NC991278284	006

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<2.00	~					1	ug/l	~			
2M. Arsenic, Total (7440-38-2)	X		X	<10.0	~					1	ug/l	~			
3M. Beryllium, Total (7440-41-7)	X		X	<1.00	~					1	ug/l	~			
4M. Cadmium, Total (7440-43-9)	X		X	<1.00	~					1	ug/l	~			
5M. Chromium, Total (7440-47-3)	X		X	<10.00	~					1	ug/l	~			
6M. Copper, Total (7440-50-8)	X	X		5.5	0.11					13	ug/l	kg/day			
7M. Lead, Total (7439-92-1)	X		X	<10.0	~					1	ug/l	~			
8M. Mercury, Total (7439-97-6)	X		X	<0.2	~					1	ug/l	~			
9M. Nickel, Total (7440-02-0)	X		X	<10.0	~					13	ug/l	~			
10M. Selenium, Total (7782-49-2)	X		X	<10.0	~					1	ug/l	~			
11M. Silver, Total (7440-22-4)	X		X	<10.0	~					1	ug/l	~			
12M. Thallium, Total (7440-28-0)	X		X	<10.0	~					1	ug/l	~			
13M. Zinc, Total (7440-66-6)	X	X		153	3.1					1	ug/l	kg/day			
14M. Cyanide, Total (57-12-5)	X		X	<5	~					1	ug/l	~			
15M. Phenols, Total	X		X	<0.01	~					1	mg/l	~			
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - VOLATILE COMPOUNDS																
1V. Acrolein (107-02-8)	X		X	<10	~					1	ug/l	~				
2V. Acrylonitrile (107-13-1)	X		X	<10	~					1	ug/l	~				
3V. Benzene (71-43-2)	X		X	<1	~					1	ug/l	~				
4V. Bis (Chloro- methyl) Ether (542-88-1)				Testing	and	Reporting	not	Required								
5V. Bromoform (75-25-2)	X		X	<1	~					1	ug/l	~				
6V. Carbon Tetrachloride (56-23-5)	X		X	<1	~					1	ug/l	~				
7V. Chlorobenzene (108-90-7)	X		X	<1	~					1	ug/l	~				
8V. Chlorodi- bromomethane (124-48-1)	X		X	<1	~					1	ug/l	~				
9V. Chloroethane (75-00-3)	X		X	<1	~					1	ug/l	~				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X		X	<5	~					1	ug/l	~				
11V. Chloroform (67-66-3)	X		X	<1	~					1	ug/l	~				
12V. Dichloro- bromomethane (75-27-4)	X		X	<1	~					1	ug/l	~				
13V. Dichloro- difluoromethane (75-71-8)	X		X	<1	~					1	ug/l	~				
14V. 1,1-Dichloro- ethane (75-34-3)	X		X	<1	~					1	ug/l	~				
15V. 1,2-Dichloro- ethane (107-06-2)	X		X	<1	~					1	ug/l	~				
16V. 1,1-Dichloro- ethylene (75-35-4)	X		X	<1	~					1	ug/l	~				
17V. 1,2-Dichloro- propane (78-87-5)	X		X	<1	~					1	ug/l	~				
18V. 1,3-Dichloro- propylene (542-75-6)	X		X	<1	~					1	ug/l	~				
19V. Ethylbenzene (100-41-4)	X		X	<1	~					1	ug/l	~				
20V. Methyl Bromide (74-83-9)	X		X	<1	~					1	ug/l	~				
21V. Methyl Chloride (74-87-3)	X		X	<1	~					1	ug/l	~				

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)																
22V. Methylene Chloride (75-09-2)	X		X	<1	~					1	ug/l	~				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1	~					1	ug/l	~				
24V. Tetrachloroethylene (127-18-4)	X		X	<1	~					1	ug/l	~				
25V. Toluene (108-88-3)	X		X	<1	~					1	ug/l	~				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1	~					1	ug/l	~				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1	~					1	ug/l	~				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1	~					1	ug/l	~				
29V Trichloroethylene (79-01-6)	X		X	<1	~					1	ug/l	~				
30V. Trichlorofluoromethane (75-69-4)	X		X	<1	~					1	ug/l	~				
31V. Vinyl Chloride (75-01-4)	X		X	<1	~					1	ug/l	~				
GC/MS FRACTION - ACID COMPOUNDS																
1A. 2-Chlorophenol (95-57-8)	X		X	<10	~					1	ug/l	~				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<10	~					1	ug/l	~				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<10	~					1	ug/l	~				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<10	~					1	ug/l	~				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<10	~					1	ug/l	~				
6A. 2-Nitrophenol (88-75-5)	X		X	<10	~					1	ug/l	~				
7A. 4-Nitrophenol (100-02-7)	X		X	<10	~					1	ug/l	~				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10	~					1	ug/l	~				
9A. Pentachlorophenol (87-86-5)	X		X	<10	~					1	ug/l	~				
10A. Phenol (108-95-2)	X		X	<10	~					1	ug/l	~				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<10	~					1	ug/l	~				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES				
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS																			
1B. Acenaphthene (83-32-9)				Testing	and	Reporting	not	Required											
2B. Acenaphthylene (208-96-8)																			
3B. Anthracene (120-12-7)																			
4B. Benzidine (92-87-5)																			
5B. Benzo (a) Anthracene (56-55-3)																			
6B. Benzo (a) Pyrene (50-32-8)																			
7B. 3,4-Benzofluoranthene (205-99-2)																			
8B. Benzo (ghi) Perylene (191-24-2)																			
9B. Benzo (k) Fluoranthene (207-08-9)																			
10B. Bis (2-Chloroethoxy) Methane (111-91-1)																			
11B. Bis (2-Chloroethyl) Ether (111-44-4)																			
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)																			
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)																			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)																			
15B. Butyl Benzyl Phthalate (85-68-7)																			
16B. 2-Chloronaphthalene (91-58-7)																			
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)																			
18B. Chrysene (218-01-9)																			
19B. Dibenzo (a,h) Anthracene (53-70-3)																			
20B. 1,2-Dichlorobenzene (95-50-1)																			
21B. 1,3-Dichlorobenzene (541-73-1)																			

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES				
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)																			
22B. 1,4-Dichloro- benzene (106-46-7)				Testing	and	Reporting	not	Required											
23B. 3,3-Dichloro- benzidine (91-94-1)																			
24B. Diethyl Phthalate (84-66-2)																			
25B. Dimethyl Phthalate (131-11-3)																			
26B. Di-N-Butyl Phthalate (84-74-2)																			
27B. 2,4-Dinitro- toluene (121-14-2)																			
28B. 2,6-Dinitro- toluene (606-20-2)																			
29B. Di-N-Octyl Phthalate (117-84-0)																			
30B. 1,2-Diphenyl- hydrazine (as Azo- benzene) (122-66-7)																			
31B. Fluoranthene (206-44-0)																			
32B. Fluorene (86-73-7)																			
33B. Hexachloro- benzene (118-74-1)																			
34B. Hexachloro- butadiene (87-68-3)																			
35B. Hexachloro- cyclopentadiene (77-47-4)																			
36B Hexachloro- ethane (67-72-1)																			
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)																			
38B. Isophorone (78-59-1)																			
39B. Naphthalene (91-20-3)																			
40B. Nitrobenzene (98-95-3)																			
41B. N-Nitro- sodimethylamine (62-75-9)																			
42B. N-Nitrosodi- N-Propylamine (621-64-7)																			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)																
43B. N-Nitro-sodiphenylamine (86-30-6)				Testing	and	Reporting	not	Required								
44B. Phenanthrene (85-01-8)																
45B. Pyrene (129-00-0)																
46B. 1,2,4-Tri-chlorobenzene (120-82-1)																
GC/MS FRACTION – PESTICIDES																
1P. Aldrin (309-00-2)																
2P. α-BHC (319-84-6)																
3P. β-BHC (319-85-7)																
4P. γ-BHC (58-89-9)																
5P. δ-BHC (319-86-8)																
6P. Chlordane (57-74-9)																
7P. 4,4'-DDT (50-29-3)																
8P. 4,4'-DDE (72-55-9)																
9P. 4,4'-DDD (72-54-8)																
10P. Dieldrin (60-57-1)																
11P. α-Endosulfan (115-29-7)																
12P. β-Endosulfan (115-29-7)																
13P. Endosulfan Sulfate (1031-07-8)																
14P. Endrin (72-20-8)																
15P. Endrin Aldehyde (7421-93-4)																
16P. Heptachlor (76-44-8)																

EPA I.D. NUMBER (copy from Item 1 of Form 1)

OUTFALL NUMBER

NC991278284

006

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)				Testing	and	Reporting	not	Required							
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1260 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
NCD986182384

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)											OUTFALL NO. 007	
PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.												
1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	1.23	0.042					37	mg/l	kg/day			
b. Chemical Oxygen Demand (COD)	23	0.783					1	mg/l	kg/day			
c. Total Organic Carbon (TOC)	8.0	0.273					1	mg/l	kg/day			
d. Total Suspended Solids (TSS)	1.2	0.041					37	mg/l	kg/day			
e. Ammonia (as N)	0.08	0.003					37	mg/l	kg/day			
f. Flow	VALUE 0.033		VALUE 0.012		VALUE 0.009		190	MGD		VALUE		
g. Temperature (winter)	VALUE 15		VALUE 15		VALUE 9.07		13	°C		VALUE		
h. Temperature (summer)	VALUE 29.9		VALUE 27.7		VALUE 23.8		24	°C		VALUE		
i. pH	MINIMUM 6.4	MAXIMUM 8.7	MINIMUM 6.4	MAXIMUM 8.7			37	STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<0.50	~					1	mg/l	~			
b. Chlorine, Total Residual	X		0.001	0.00					73	mg/l	kg/dy			
c. Color	X		5.0	~					1	CU	~			
d. Fecal Coliform	X		4.2	0.143					37	cu/100ml	kg/dy			
e. Fluoride (16984-48-8)		X	<0.2	~					1	mg/l	~			
f. Nitrate-Nitrite (as N)	X		1.2	0.041					5	mg/l	kg/dy			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		1.3	0.044					5	mg/l	kg/dy			
h. Oil and Grease		X	<3.0	~					1	mg/l	~			
i. Phosphorus (as P), Total (7723-14-0)	X		0.38	0.013					5	mg/l	kg/dy			
j. Radioactivity														
(1) Alpha, Total		X	<5.00	~					1	pCi/l	~			
(2) Beta, Total	X		6.93	1.38 e ⁻¹⁰					1	pCi/l	cu/dy			
(3) Radium, Total			Testing	and	Reporting	not	Required							
(4) Radium 226, Total			Testing	and	Reporting	not	Required							
k. Sulfate (as SO ₄) (14808-79-8)	X		30	1.022					1	mg/l	kg/dy			
l. Sulfide (as S)		X	<0.1	~					1	mg/l	~			
m. Sulfite (as SO ₃) (14265-45-3)	X		1.5	0.051					1	mg/l	kg/dy			
n. Surfactants		X	<0.1	~					1	mg/l	~			
o. Aluminum, Total (7429-90-5)	X		340	11.582					1	ug/l	kg/dy			
p. Barium, Total (7440-39-3)		X	<10	~					1	ug/l	~			
q. Boron, Total (7440-42-8)	X		98.2	3.345					1	ug/l	kg/dy			
r. Cobalt, Total (7440-48-4)		X	<10.0	~					1	ug/l	~			
s. Iron, Total (7439-89-6)		X	<50	~					1	ug/l	~			
t. Magnesium, Total (7439-95-4)	X		2.27	0.078					1	mg/l	kg/dy			
u. Molybdenum, Total (7439-98-7)	X		11.0	0.375					1	ug/l	kg/dy			
v. Manganese, Total (7439-96-5)	X		23.6	0.804					1	ug/l	kg/dy			
w. Tin, Total (7440-31-5)		X	<10.0	~					1	ug/l	~			
x. Titanium, Total (7440-32-6)		X	<5.0	~					1	ug/l	~			

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
NCD986182384	007

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)							
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES					
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS						
METALS, CYANIDE, AND TOTAL PHENOLS																					
1M. Antimony, Total (7440-36-0)	X		X	< 2.0	~					1	ug/l	~									
2M. Arsenic, Total (7440-38-2)	X		X	<10.0	~					1	ug/l	~									
3M. Beryllium, Total (7440-41-7)	X		X	<1.0	~					1	ug/l	~									
4M. Cadmium, Total (7440-43-9)	X		X	<1.0	~					1	ug/l	~									
5M. Chromium, Total (7440-47-3)	X		X	<10.0	~					1	ug/l	~									
6M. Copper, Total (7440-50-8)	X		X	<10.0	~					1	ug/l	~									
7M. Lead, Total (7439-92-1)	X		X	<10.0	~					1	ug/l	~									
8M. Mercury, Total (7439-97-6)	X		X	<0.2	~					1	ug/l	~									
9M. Nickel, Total (7440-02-0)	X		X	<10.0	~					1	ug/l	~									
10M. Selenium, Total (7782-49-2)	X		X	<10.0	~					1	ug/l	~									
11M. Silver, Total (7440-22-4)	X		X	<10.0	~					1	ug/l	~									
12M. Thallium, Total (7440-28-0)	X		X	<1.0	~					1	ug/l	~									
13M. Zinc, Total (7440-66-6)	X	X		17.8	0.606					1	ug/l	kg/day									
14M. Cyanide, Total (57-12-5)	X	X		0.005	0.0					1	mg/l	kg/day									
15M. Phenols, Total	X		X	<0.01	~					1	mg/l	kg/day									
DIOXIN																					
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS																	

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<10						1	ug/l				
2V. Acrylonitrile (107-13-1)	X		X	<10						1	ug/l				
3V. Benzene (71-43-2)	X		X	<1.0						1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)				Testing	and	Reporting	not	Required							
5V. Bromoform (75-25-2)	X		X	<1.0						1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	X		X	<1.0						1	ug/l				
7V. Chlorobenzene (108-90-7)	X		X	<1.0						1	ug/l				
8V. Chlorodibromomethane (124-48-1)	X		X	<1.0						1	ug/l				
9V. Chloroethane (75-00-3)	X		X	<1.0						1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<5.0						1	ug/l				
11V. Chloroform (67-66-3)	X	X		2.7	0.00					1	ug/l	kg/day			
12V. Dichlorobromomethane (75-27-4)	X		X	<1.0						1	ug/l				
13V. Dichlorodifluoromethane (75-71-8)	X		X	<1.0						1	ug/l				
14V. 1,1-Dichloroethane (75-34-3)	X		X	<1.0						1	ug/l				
15V. 1,2-Dichloroethane (107-06-2)	X		X	<1.0						1	ug/l				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<1.0						1	ug/l				
17V. 1,2-Dichloropropane (78-87-5)	X		X	<1.0						1	ug/l				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<1.0						1	ug/l				
19V. Ethylbenzene (100-41-4)	X		X	<1.0						1	ug/l				
20V. Methyl Bromide (74-83-9)	X		X	<1.0						1	ug/l				
21V. Methyl Chloride (74-87-3)	X		X	<1.0						1	ug/l				

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES				
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)																			
22V. Methylene Chloride (75-09-2)	X		X	<1.0	~					1	ug/l	~							
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1.0	~					1	ug/l	~							
24V. Tetrachloroethylene (127-18-4)	X		X	<1.0	~					1	ug/l	~							
25V. Toluene (108-88-3)	X		X	<1.0	~					1	ug/l	~							
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1.0	~					1	ug/l	~							
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1.0	~					1	ug/l	~							
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1.0	~					1	ug/l	~							
29V. Trichloroethylene (79-01-6)	X		X	<1.0	~					1	ug/l	~							
30V. Trichlorofluoromethane (75-69-4)	X		X	<1.0	~					1	ug/l	~							
31V. Vinyl Chloride (75-01-4)	X		X	<1.0	~					1	ug/l	~							
GC/MS FRACTION – ACID COMPOUNDS																			
1A. 2-Chlorophenol (95-57-8)	X		X	<10	~					1	ug/l	~							
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<10	~					1	ug/l	~							
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<10	~					1	ug/l	~							
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<10	~					1	ug/l	~							
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<10	~					1	ug/l	~							
6A. 2-Nitrophenol (88-75-5)	X		X	<10	~					1	ug/l	~							
7A. 4-Nitrophenol (100-02-7)	X		X	<10	~					1	ug/l	~							
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<10	~					1	ug/l	~							
9A. Pentachlorophenol (87-86-5)	X		X	<10	~					1	ug/l	~							
10A. Phenol (108-95-2)	X		X	<10	~					1	ug/l	~							
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<10	~					1	ug/l	~							

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS																
1B. Acenaphthene (83-32-9)				Testing	and	Reporting	not	Required								
2B. Acenaphthylene (208-96-8)																
3B. Anthracene (120-12-7)																
4B. Benzidine (92-87-5)																
5B. Benzo (a) Anthracene (56-55-3)																
6B. Benzo (a) Pyrene (50-32-8)																
7B. 3,4-Benzo- fluoranthene (205-99-2)																
8B. Benzo (ghi) Perylene (191-24-2)																
9B. Benzo (k) Fluoranthene (207-08-9)																
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)																
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)																
12B. Bis (2- Chloroisopropyl) Ether (102-80-1)																
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)																
14B. 4-Bromophenyl Phenyl Ether (101-55-3)																
15B. Butyl Benzyl Phthalate (85-68-7)																
16B. 2-Chloro- naphthalene (91-58-7)																
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)																
18B. Chrysene (218-01-9)																
19B. Dibenzo (a,h) Anthracene (53-70-3)																
20B. 1,2-Dichloro- benzene (95-50-1)																
21B. 1,3-Di-chloro- benzene (541-73-1)																

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)																	
22B. 1,4-Dichloro- benzene (106-46-7)				Testing	and	Reporting	not	Required									
23B. 3,3-Dichloro- benzidine (91-94-1)																	
24B. Diethyl Phthalate (84-66-2)																	
25B. Dimethyl Phthalate (131-11-3)																	
26B. Di-N-Butyl Phthalate (84-74-2)																	
27B. 2,4-Dinitro- toluene (121-14-2)																	
28B. 2,6-Dinitro- toluene (806-20-2)																	
29B. Di-N-Octyl Phthalate (117-84-0)																	
30B. 1,2-Diphenyl- hydrazine (as Azo- benzene) (122-66-7)																	
31B. Fluoranthene (206-44-0)																	
32B. Fluorene (86-73-7)																	
33B. Hexachloro- benzene (118-74-1)																	
34B. Hexachloro- butadiene (87-68-3)																	
35B. Hexachloro- cyclopentadiene (77-47-4)																	
36B Hexachloro- ethane (67-72-1)																	
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)																	
38B. Isophorone (78-59-1)																	
39B. Naphthalene (91-20-3)																	
40B. Nitrobenzene (98-95-3)																	
41B. N-Nitro- sodimethylamine (62-75-9)																	
42B. N-Nitrosodi- N-Propylamine (621-64-7)																	

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)																	
43B. N-Nitro-sodiphenylamine (86-30-8)				Testing	and	Reporting	not	Required									
44B. Phenanthrene (85-01-8)																	
45B. Pyrene (129-00-0)																	
46B. 1,2,4-Tri-chlorobenzene (120-82-1)																	
GC/MS FRACTION – PESTICIDES																	
1P. Aldrin (309-00-2)																	
2P. α-BHC (319-84-6)																	
3P. β-BHC (319-85-7)																	
4P. γ-BHC (58-89-9)																	
5P. δ-BHC (319-86-8)																	
6P. Chlordane (57-74-9)																	
7P. 4,4'-DDT (50-29-3)																	
8P. 4,4'-DDE (72-55-9)																	
9P. 4,4'-DDD (72-54-8)																	
10P. Dieldrin (60-57-1)																	
11P. α-Endosulfan (115-29-7)																	
12P. β-Endosulfan (115-29-7)																	
13P. Endosulfan Sulfate (1031-07-8)																	
14P. Endrin (72-20-8)																	
15P. Endrin Aldehyde (7421-93-4)																	
16P. Heptachlor (76-44-8)																	

EPA I.D. NUMBER (copy from Item 1 of Form 1)

OUTFALL NUMBER

NCD986182384

007

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)				Testing	and	Reporting	not	Required							
18P. PCB-1242 (53469-21-9)															
19P. PCB-1254 (11097-69-1)															
20P. PCB-1221 (11104-28-2)															
21P. PCB-1232 (11141-16-5)															
22P. PCB-1248 (12672-29-6)															
23P. PCB-1280 (11096-82-5)															
24P. PCB-1016 (12674-11-2)															
25P. Toxaphene (8001-35-2)															

**FORM
2F
NPDES**



Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

[illegible]

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

[illegible]

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
	See Attachment 8				

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

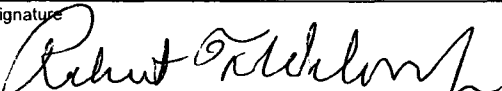
See Attachments 9 and 10

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
	See Attachment 10	

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Robert T. Wilson, Jr. HNP Env. Coord.		01/26/11

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

The storm water outfalls were visually monitored on November 3, 2010. No non storm water was observed at any of the outfall locations.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

There have been no reportable leaks or spills of toxic or hazardous pollutants in the last 3 years.

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (list all such pollutants below)

☒ No (go to Section IX)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (list all such pollutants below)

☒ No (go to Section IX)

No toxicity tests have been performed on storm water outfalls.

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☒ Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☐ No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Environmental Conservation Laboratories, Inc.	102-A Woodwinds industrial Ct. Cary NC 27511	(919) 497-3090	All Pollutants

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (Type Or Print) Kelvin Henderson - Plant General Manager	B. Area Code and Phone No. (919) 362-2000
C. Signature 	D. Date Signed 1/26/11

VII. Discharge information (Continued from page 3 of Form 2F)

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Temperature						
Fecal Coliform						
Ammonia						
Copper (7440-02-0)						
Nickel (7440-02-0)						
Zinc (7440-66-6)						
Total Residual Chlorine						
Hydrazine						
Chromium (7440-50-8)						
Iron (7439-50-8)						
Tot. Susp. Residu						
Free Avail. Clor						
Manganese (7439-96-5)						

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

[illegible]

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)

7. Provide a description of the method of flow measurement or estimate.

VII. Discharge information (Continued from page 3 of Form 2F)

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease		N/A				
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Temperature						
Fecal Coliform						
Ammonia						
Copper (7440-02-0)						
Nickel (7440-02-0)						
Zinc (7440-66-6)						
Total Residual Chlorine						
Hydrazine						
Chromium (7440-50-8)						
Iron (7439-50-8)						
Tot. Susp. Residu						
Free Avail. Chlor						
Manganese (7439-96-5)						

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

[illegible]

			4.	5.	
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1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)

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Attachment 1

Form 1 - Item X – Existing Environmental Permits

Progress Energy Carolinas, Inc.
Harris Nuclear Plant and Harris Energy & Environmental Center
National Pollutant Discharge Elimination System Permit Number NC0039586

Attachment 1

Form 1 - Item X Existing Environmental Permits

Issuing Agency	Type of Permit	ID Number
Division of Health Services	Main Reservoir	633
Division of Health Services	Auxiliary Reservoir	633
Division of Air Quality	Synthetic Minor	08455
Division of Environmental Management (DEM) *	Well Construction	2497
DEM*	Well Construction	1290
DEM*	Well Construction	1145
DEM*	Well Construction	922
DEM*	410 Certification	WQC-1198
DEM*	401 Certification	WQC-214
Division of Solid Waste Management	Industrial Landfill	92-10
Division of Waste Management	Underground Storage Tank	0-006715
DWQ	Laboratory Certification	398
DWQ	Oil Terminal Facility	924020063
Division of Water Quality	NPDES (HNP/HEEC)	NC0039586
DEM*	NPDES (HNP Landfill)	COC NGG 120032
DEM*	Nondischarge	WQ0009475
DEM*	Nondischarge	WQ0000584**
DEM*	Nondischarge	WQ0000506**
DWQ	Nondischarge	WQ0000838**
Wake County Planning	Land Use	3830
Wake County Planning	Land Use	13383
Nuclear Regulatory Commission	Facility Operating License	NPF63
Division of Radiation Protection	Radioactive Materials License	092-0218-4
USEPA	Hazardous Waste	NCD991278284

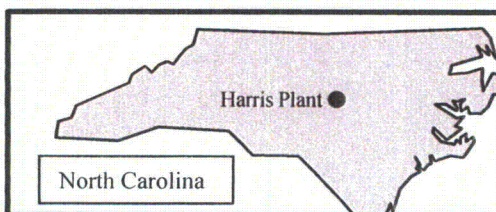
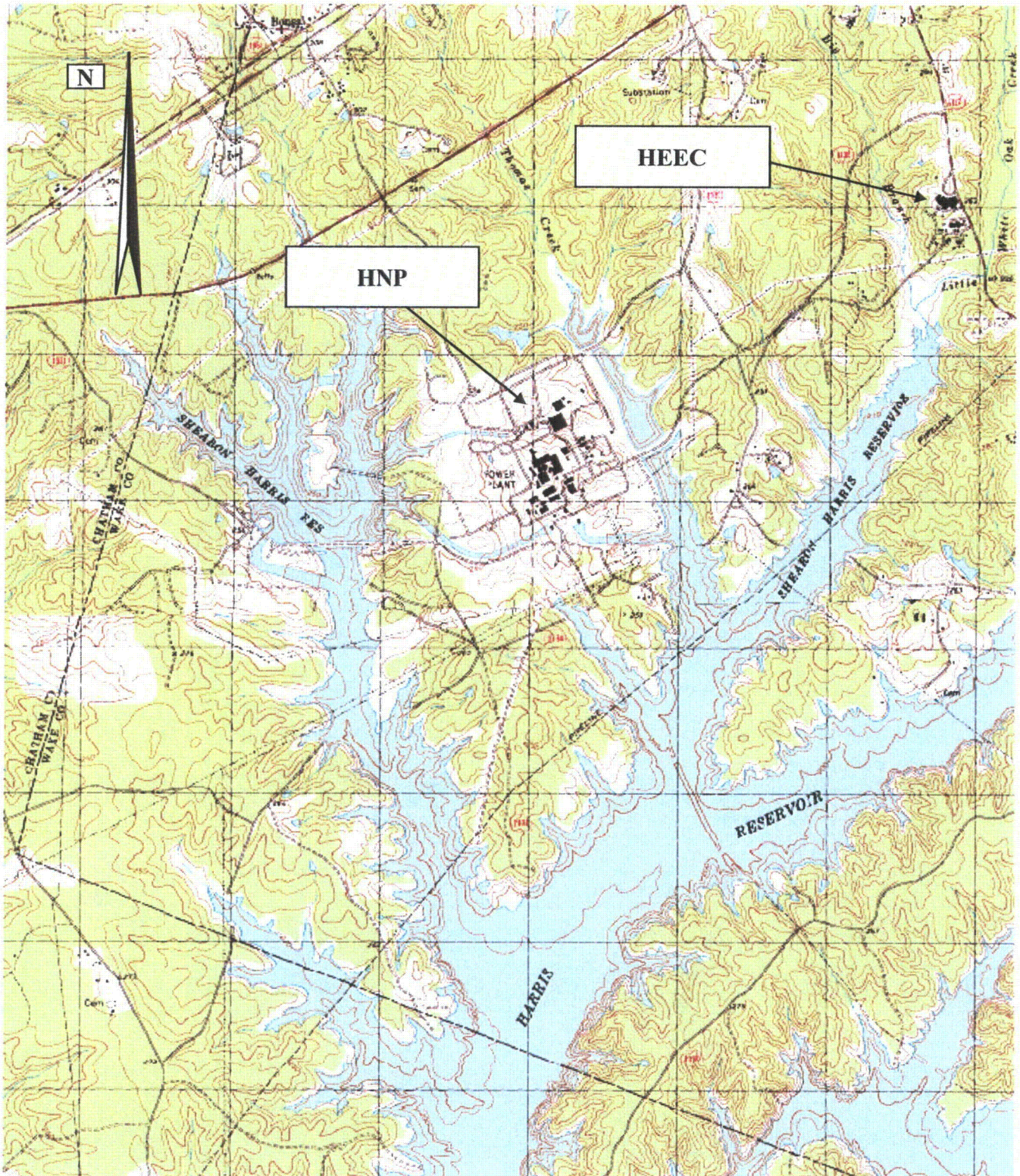
* Since issuance of permit agency name has changed to Division of Water Quality.

Progress Energy Carolinas, Inc.
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** Permits held by contract disposal firm

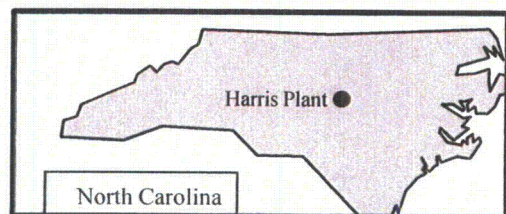
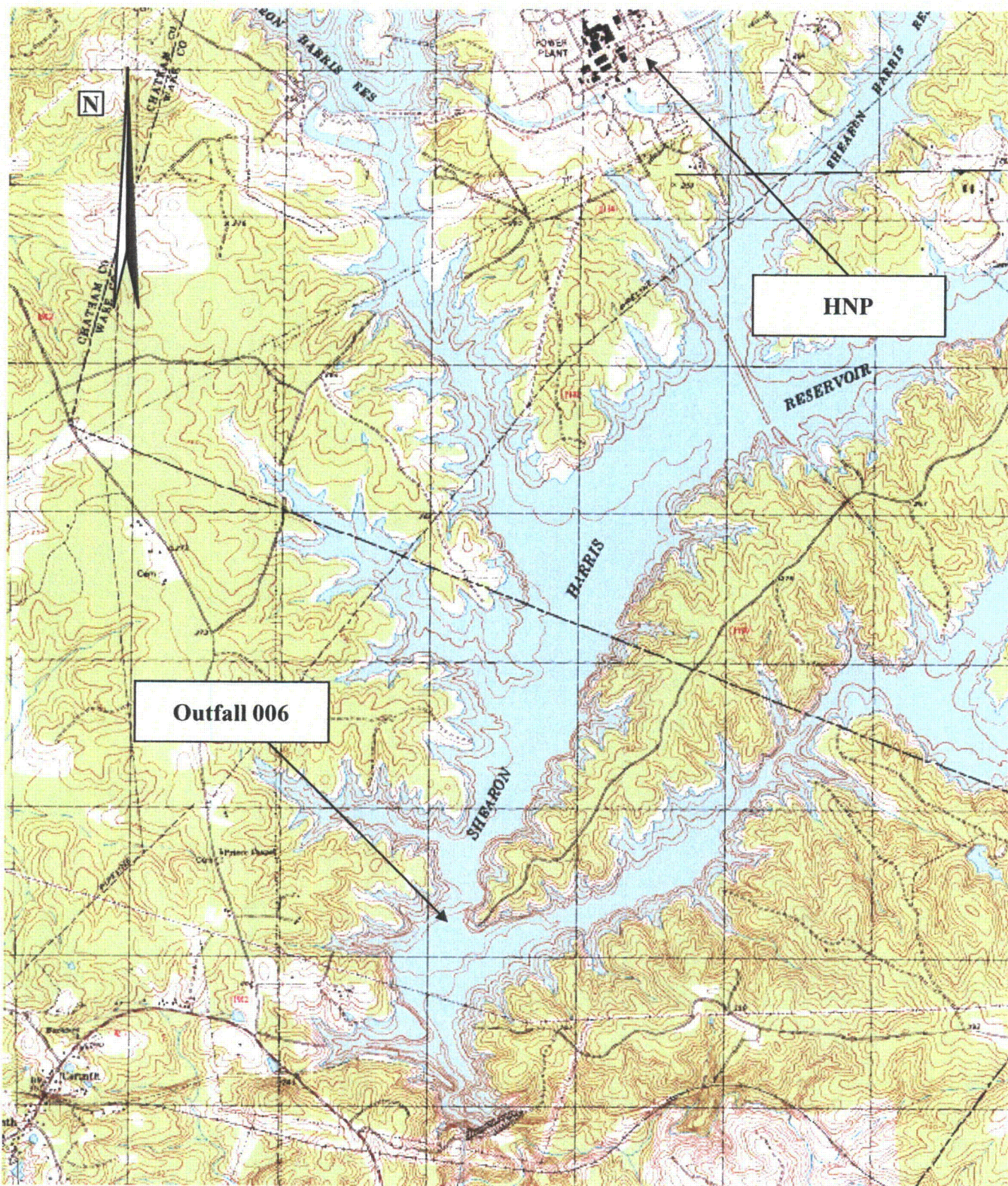
Attachment 2

Form 1 - Item XI – Maps



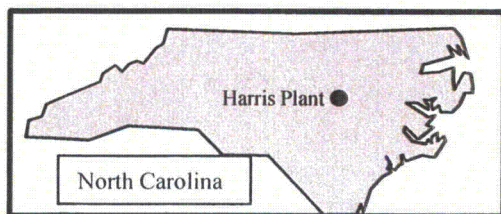
Attachment 1 - Form 1 - Item XI - Map

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
Wake County
Page 1 of 3



Attachment 1 - Form 1 - Item XI - Map

Progress Energy Carolinas, Inc.
Harris Nuclear Plant
Wake County
Page 2 of 3



Attachment 1 - Form 1 - Item XI - Map

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Harris Nuclear Plant
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Page 3 of 3

Progress Energy Carolinas, Inc.

Harris Nuclear Plant

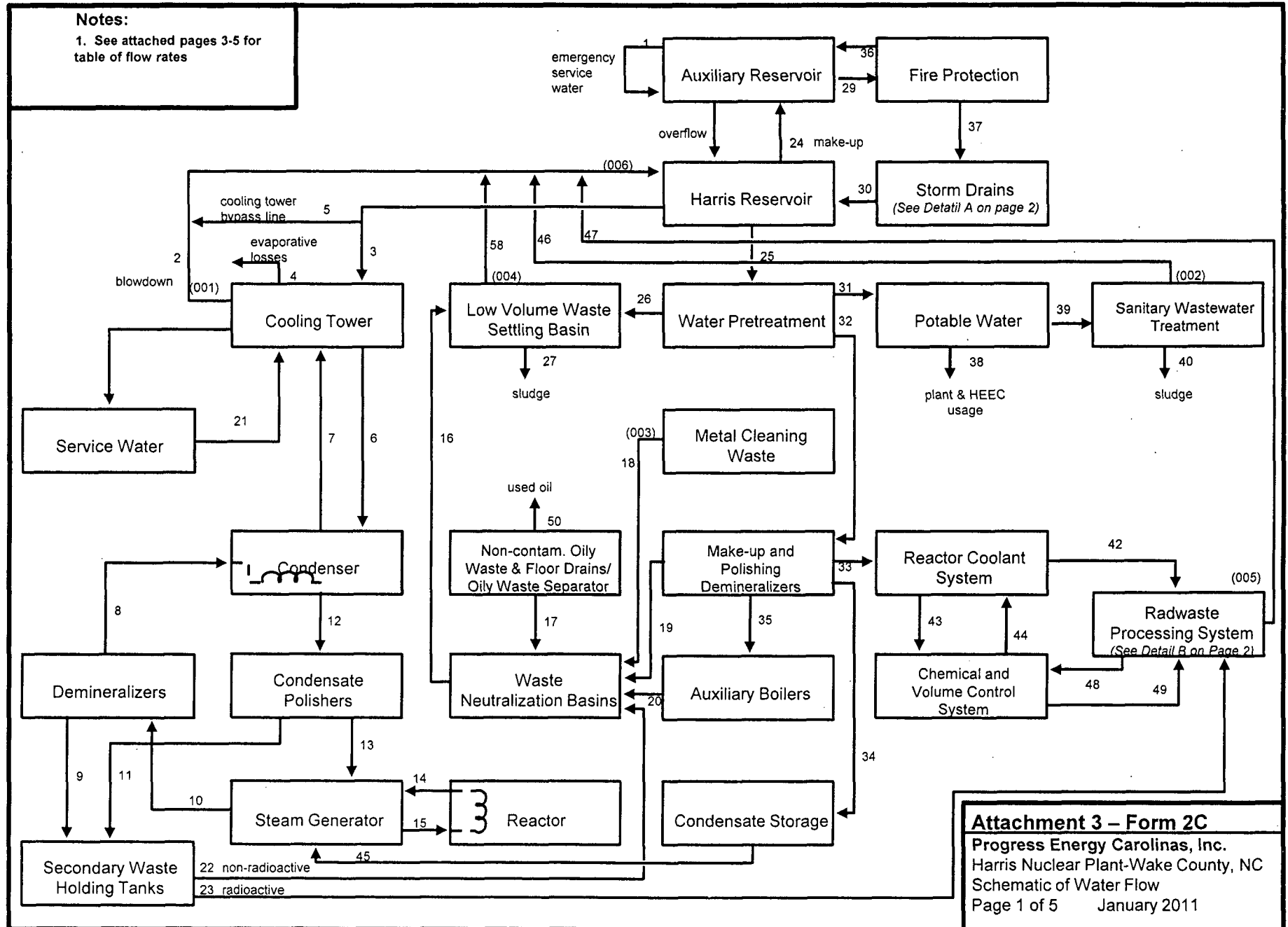
National Pollutant Discharge Elimination System Permit Number NC0039586

Attachment 3

Form 2C - Item II - A Flows, Sources of Pollution, and Treatment Technologies

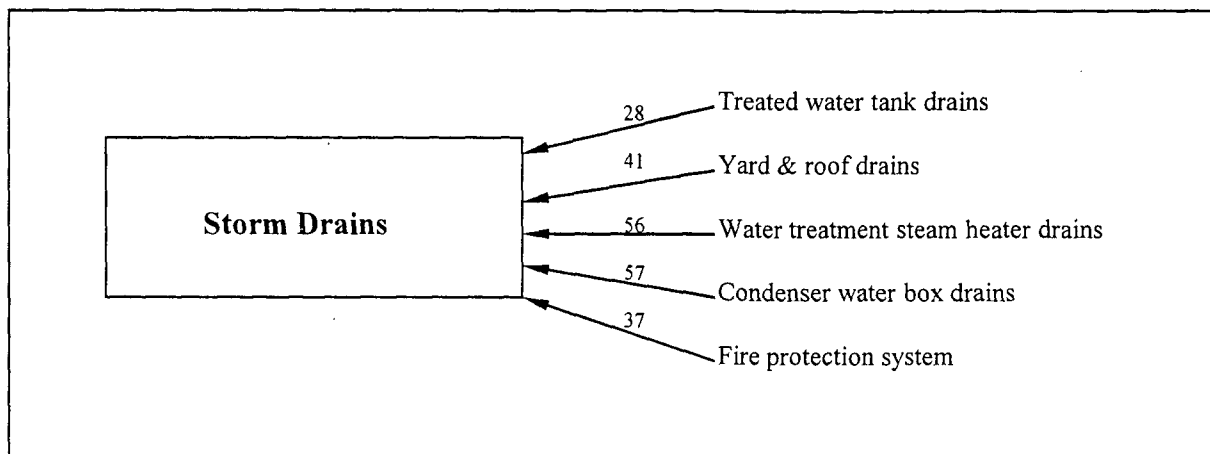
Notes:

1. See attached pages 3-5 for table of flow rates

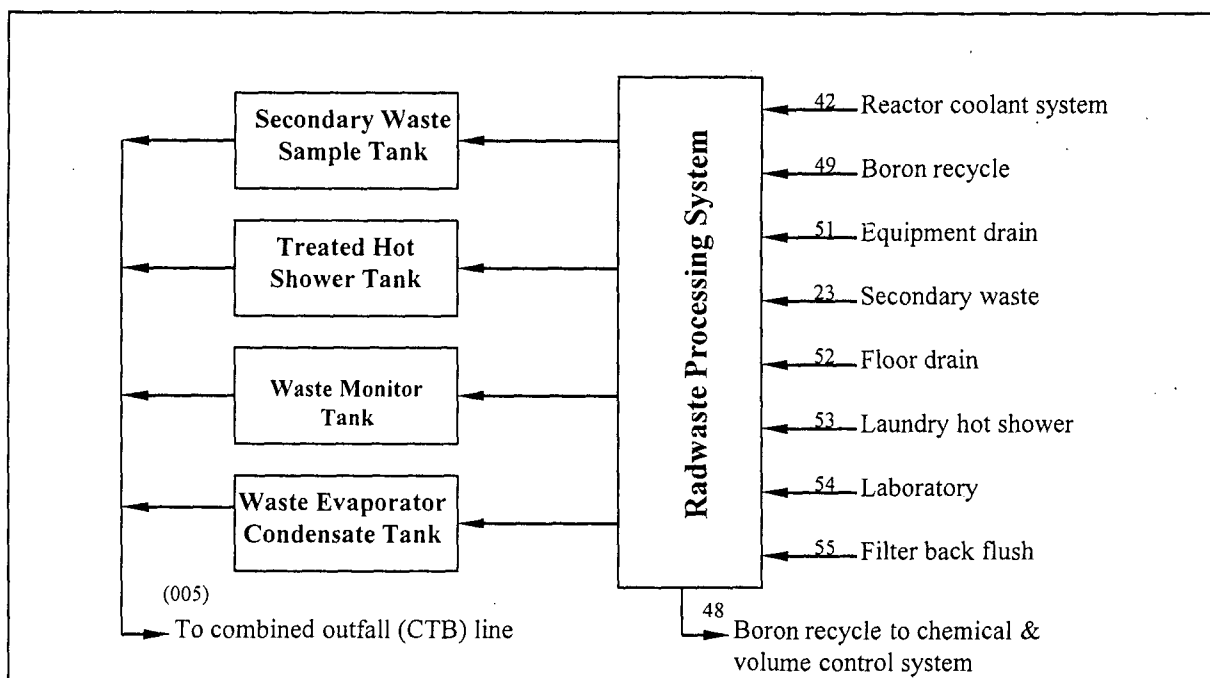


Attachment 3 – Form 2C

Progress Energy Carolinas, Inc.
Harris Nuclear Plant-Wake County, NC
Schematic of Water Flow
Page 1 of 5 January 2011



Detail A



Detail B

Attachment 3 – Form 2C

Progress Energy Carolinas, Inc.
Harris Nuclear Plant – Wake County, NC
Schematic of Water Flow
Page 2 of 5 January 2011

Progress Energy Carolinas, Inc.
Harris Nuclear Plant and Harris Energy & Environmental Center
National Pollutant Discharge Elimination System Permit Number NC0039586

Attachment 3

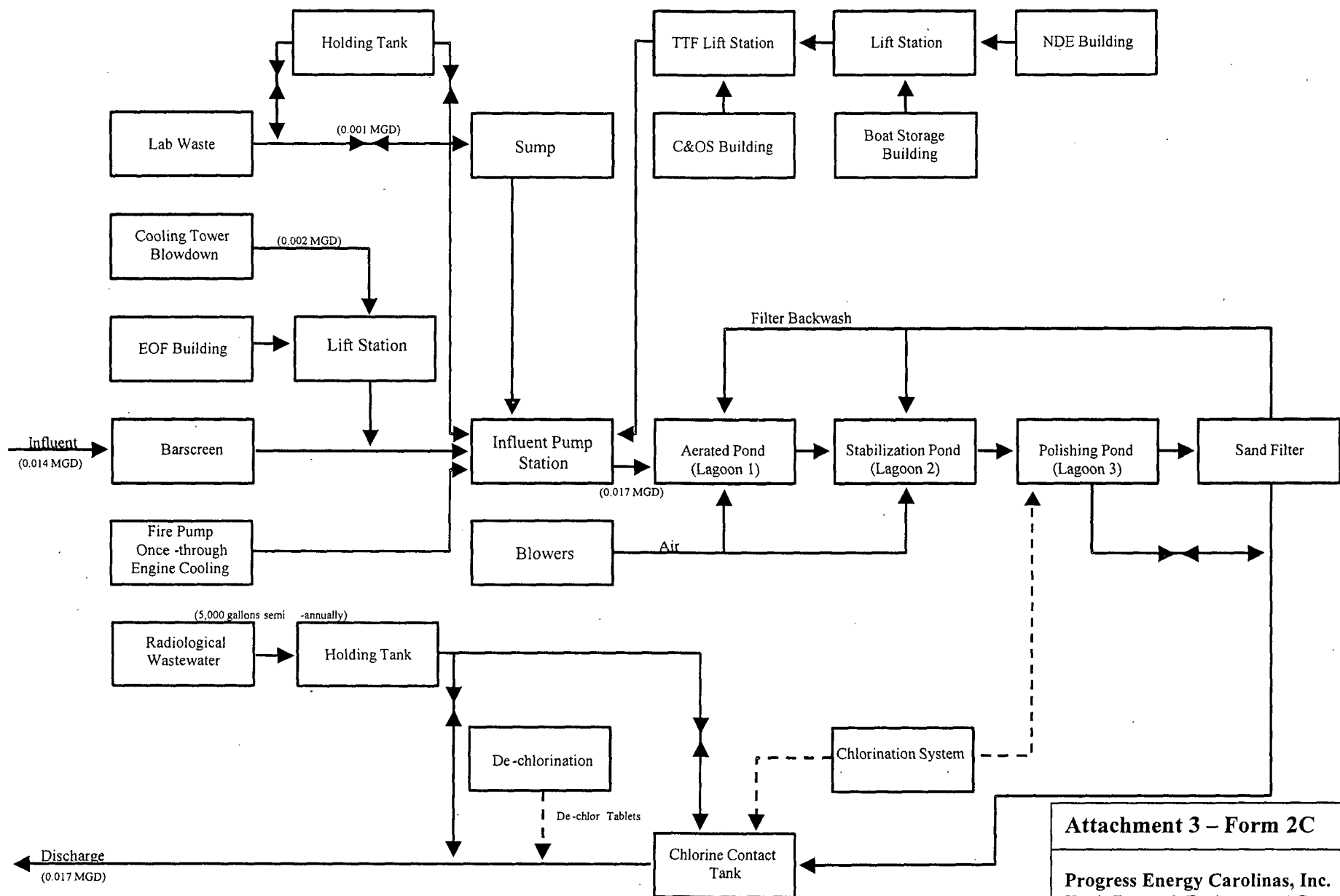
Form 2C - Item II-A Flows, Sources of Pollution, and Treatment Technologies

Stream	Flow @ Maximum Power*	Flow @ Temperature Shutdown*	Notes
1	21,000 gpm	21,000 gpm	Emergency/Testing/ Intermittent use
2	510 MGM	0 – 5 MGM	Varies with dissolved solids
3	864 MGM	9 MGM	Cooling tower make-up
4	648 MGM	4 MGM	Average meteorological condition
5	0 – 14,000 gpm	0 – 14,000 gpm	Cooling tower bypass line
6	500,000 gpm	0 – 284,000 gpm	–
7	500,000 gpm	0 – 284,000 gpm	–
8	300 gpm	0 – 176 gpm	–
9	20,800	0 – 10,000	Intermittent operation
10	300 gpm	0 – 176 gpm	–
11	1.2 MGM	210,000	Condensate polisher regenerations and rinse (Intermittent operation)
12	24,000 gpm	0 – 16,500 gpm	–
13	24,000 gpm	0 – 16,500 gpm	–
14	315,900 gpm	0 – 185,000 gpm	–
15	315,900 gpm	0 – 185,000 gpm	–
16	6 MGM	5 MGM	–
17	208,300	208,300	–
18	0	0	Very infrequent operation
19	666,600	666,600	–
20	500	500	Auxiliary boiler drains
21	50,000 gpm	50,000 gpm	Service water system
22	1,220,800	220,000	Secondary waste (Nonradiological), alternate route
23	0	0	Secondary waste (Radiological), not normally used
24	0 –1 MGM	–	Make-up as needed
25	7,645,000	7,645,000	–
26	4,000,000	4,000,000	–
27	300 lbs/month	300 lbs/month	Settling basin sludge
28	3,033	3,033	Treated water tank drains

Progress Energy Carolinas, Inc.
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National Pollutant Discharge Elimination System Permit Number NC0039586

29	11,000	11,000	Fire pump test
30	8,786,200	8,786,2000	Storm drains includes rainwater and firewater
31	1.2 MGM	1.2 MGM	Potable water
32	2,445,000	2,445,000	—
33	39,000	39,000	Reactor coolant system
34	1,200,000	1,200,000	Demineralized water
35	500	500	Demineralized water to auxiliary boilers
36	11,000	11,000	Fire pump test
37	1,167	1,167	Hydrant and drain tests
38	693,000	693,000	Plant and HE&EC water usage
39	0.2 MGM	0.2 MGM	Sanitary waste
40	—	—	Sludge removal as necessary
41	8,340,000	8,340,000	Yard and roof drains
42	10,000	10,000	—
43	33,300	33,300	—
44	—	—	Makeup as required
45	1,220,800	220,000	Makeup 9 and 11
46	0.2 MGD	0.2 MGD	Sanitary waste
47	413,000	413,000	Radwaste
48	10,000 gpm	10,000 gpm	Boron recycle
49	67,000	67,000	Boron Recycle/CVS letdown
50	30	30	Used oil
51	75,000	75,000	Equipment drains
52	316,000	316,000	Floor drains
53	7,000	7,000	Decontaminated waste
54	6,000	6,000	Laboratory waste (chemistry)
55	4,100	4,100	Varies with number of filter backwashes
56	5 – 10 gpm	5 – 10 gpm	Water treatment steam heater drains
57	120,000	120,000	Condenser water box (approximately two drains/year)
58	6,950,700	6,950,700	Low-volume waste

* Units: Gallons per month unless otherwise noted



Attachment 3 – Form 2C

Progress Energy Carolinas, Inc.
 Harris Energy & Environmental Center
 Wake County, NC
 Schematic of Water Flow
 Page 5 of 5 January 2011

Progress Energy Carolinas, Inc.

Harris Nuclear Plant

National Pollutant Discharge Elimination System Permit Number NC0039586

Attachment 4

Form 2C - Item II - B Flows, Sources of Pollution, and Treatment Technologies

Progress Energy Carolinas, Inc.
Harris Nuclear Plant and Harris Energy & Environmental Center
National Pollutant Discharge Elimination System Permit Number NC0039586

Attachment 4
Form 2C – Item II-B Flows, Sources of Pollution, and Treatment Technologies

HARRIS NUCLEAR PLANT

The Harris Nuclear Plant (HNP) consists of a 900 MW generating unit and associated facilities. The HNP systems include a Westinghouse pressurized water reactor, three re-circulating steam generators, a turbine generator, a one-pass condenser, an open re-circulating (cooling tower) cooling water system, and a lake to makeup water lost by evaporation. In a pressurized water reactor design, steam is produced in the secondary system steam generators using hot water from the reactor core. The primary system does not normally come into contact with any other part of the generating system, such as the steam cycle which includes the turbine and the condenser.

Outfall 006 – Combined Outfall to Harris Lake

The HNP operates on an open re-circulating cooling system using a natural draft cooling tower and 4100 acre makeup water storage reservoir. All five major wastewater discharges at the HNP are combined in a 36-inch diameter common pipe which discharges to the Harris Lake 500 feet offshore at 40 feet below the surface (Discharge Serial No. 006 in this application.) The individual waste streams contributing to the common outfall pipe are: cooling tower blowdown, sanitary waste treatment plant effluent, metal cleaning wastes, low-volume wastes, and radwaste system. (These waste streams are enumerated in the present permit as Discharge Serial Numbers 001, 002, 003, 004, and 005, respectively.) Toxicity testing has been conducted on the combined outfall line since February 1990. Each of the waste streams, as well as miscellaneous discharge points, are described in this narrative. Also included is a list of chemicals which are expected to be in waste streams from the HNP (Attachment 5).

Outfall 001 - HNP Cooling Tower Blowdown discharge to Outfall 006

The cooling tower provides the condenser with a supply of water for removing the heat rejected by the condensation of steam. (The circulating water temperature rise across the condenser is 25 F.) This heat is dissipated primarily by evaporation as the water falls through the tower. This evaporation is essentially pure water vapor, with the dissolved and suspended solids remaining to concentrate.

To prevent the solids from causing scale and corrosion problems, some of the concentrated cooling water is discharged from the cooling tower basin, i.e., blowdown. During plant operation, the cooling tower basin continuously discharges for optimum performance. Blowdown currently averages approximately 6 MGD. Makeup water for cooling tower evaporative losses and cooling tower blowdown is provided from the main reservoir. The cooling tower also serves as a partial source of service water, which is used for non-contact cooling of auxiliary equipment throughout the plant. The cooling tower is infrequently drained

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Harris Nuclear Plant and Harris Energy & Environmental Center
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for maintenance. The normal operating procedure includes draining the residual water to the lake via Discharge Serial No. 006.

Occasionally, the condensers are drained for maintenance and repairs. When the condensers are drained, it is necessary to route the residual water (approximately 60,000 gallons per condenser per event) to area storm drains which discharge to the lake. This water is monitored prior to discharge for appropriate parameters required for cooling tower blowdown in accordance with the NPDES permit. Presently, condenser draining events are reported with relevant monitoring data to DWQ on attachments to monthly Discharge Monitoring Reports.

Outfall 002 - HNP Sewage Treatment Facility discharge to Outfall 006

A 0.025 MGD extended aeration sewage treatment facility serves the HNP. The facility consists of an equalization basin, aeration basin, sludge holding tanks, raw sewage holding tank, clarifiers, and chlorine contact tanks. Disinfected effluent is pumped to the common outfall pipe. Currently, sludge is land applied off site by a contract disposal firm (Granville Farms, Inc., Permit No. WQ0000838). Because the HNP sewage treatment facility receives industrial type waste as well as domestic type waste, the land application of the mixed sludge meets the exemption conditions stipulated at 40 CFR Part 503.6.

In addition to sanitary waste, HVAC condensate is discharged to the sewage treatment facility.

Outfall 003 - HNP Metal Cleaning Wastes discharge to Outfall 006

Infrequently, cleaning of heat exchanger equipment by chemical solutions may be necessary. Cleaning solutions would be routed to the waste neutralization basin for pH adjustment (or other chemical neutralization) prior to discharge to the settling basin where further treatment by sedimentation occurs. To date, the only metal cleaning which has been conducted was a preoperational flush. If a new system is added in the future or if an existing system is changed out, flushing could be necessary again. Also, metal cleaning may be needed in the future for plant systems (e.g., steam generators, auxiliary boilers, piping, etc.). Chemical solutions used may include phosphates, organic cleaners, citric acid, or oxalic acid.

Outfall 004 - HNP Low-Volume Wastes discharge to Outfall 006

In the operation of the HNP, there are many processes which result in intermittent low volumes of various waste streams. Low-volume waste is treated by neutralization (for pH adjustment), sedimentation, and separation. These wastes may be treated in the oily waste separator and/or neutralization basin as needed prior to routing to the sedimentation basin, which ultimately discharges to the common outfall line. Annually as a maintenance practice this basin may be physically cleaned using chlorine, a bisulfate is added after cleaning to remove the chlorine

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before discharge. Chemicals present in these systems may include corrosion products (such as copper and iron) corrosion inhibitors (such as nitrites, molybdates, ammonia, hydrazine, carbohydrazide, and ethanolamine), acids and bases from water treatment processes, and wastewater from ion exchange processes and ammonium bisulfite from dechlorination. Low-volume waste flow from the settling basin averages approximately 0.2 MGD. The various low-volume waste sources are described below:

- a) Water treatment system wastes from processing of demineralized water and potable water.

(The water treatment system includes coagulation, filtration, disinfection, and ion exchange. Wastes from treatment include filter backwash and demineralizer regeneration wastes.)

- b) Non-radioactive oily waste, floor drains, and chemical tank containment drains.

(Turbine building wastes which could contain oil are routed to the oily waste separator for treatment prior to routing to the neutralization basin. Used oil is collected by a contractor for reclamation.)

- c) Steam generator and auxiliary boiler draining following wet layup
- d) Non-radioactive secondary waste from condensate polishers
- e) Miscellaneous drains/leaks from condenser, steam generator, and secondary components
- f) Auxiliary boiler system blowdown
- g) Miscellaneous waste streams not otherwise identified elsewhere in this application.

Outfall 005 - HNP Radwaste Treatment System discharge to Outfall 006

The radwaste system is designed to collect, store, process, and release any radioactive or potentially radioactive liquids associated with operation of the nuclear power plant. The waste streams are collected in tanks and sampled for conventional pollutants and radioactivity. The specific batch treatment is selected based on these analytical results. This allows for selection of the proper treatment processes for each individual batch. Most radwaste streams are treated by the Modular Fluidized Transfer Demineralization System (MFTDS) that uses filtration and ion exchange in a manner that minimizes the production of solid wastes. Boric acid is recycled. The secondary waste system (SWS) is for treating radioactively-contaminated water from the secondary steam cycle system; however, since that system is not normally contaminated, those flows are routed to the normal low-volume waste treatment system after radiological monitoring.

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After treatment, the radwaste flows are stored in one of four tanks: the secondary waste sample tank, the treated laundry and hot shower tank, the waste monitor tank, or the waste evaporator condensate tank. After monitoring to verify adequate treatment, the tanks are discharged to the common outfall line.

The cooling tower bypass line provides a flow of lake water for radwaste releases, as regulated by the NRC.

Other HNP Discharges

1. Storm Drains

Runoff from parking lots, outside storage areas, roof drains, and other areas on the plant site are collected in storm drains and ultimately routed to release points which discharge to Harris Lake. Flow contributed from those areas is estimated at 8.8 million gallons per month, based on average rainfall of 43 inches per year and a runoff assumption factor of 0.7.

In addition to stormwater, a few miscellaneous sources of water are also intermittently routed to the storm drains. These sources that have a minor contribution to overall storm drain flows are as follows:

a. Upflow filter clear well drains

The upflow filter clearwell stores filtered lake water which is used in the potable water treatment system. Periodically, some of the water from this tank is drained to the storm drains that discharge to Harris Lake. This water may contain low concentrations of chlorine because sodium hypochlorite is added to control biological growth in the tank prior to treatment through the upflow filter.

b. Heat exchanger on the demineralizer feedwater

It is necessary to heat the source water to the demineralized water treatment system to achieve optimum degassification. To accomplish this, steam is used to heat the feedwater. The condensed steam is discharged to the storm drains that flow to Harris Lake at approximately 5 - 10 gallons per minute. This steam could contain trace amounts of hydrazine and ammonia used for chemistry control in the auxiliary boiler steam system. Due to the low flow rate and the long retention time, the temperature of the condensed steam should be at ambient temperature upon reaching the lake.

c. Condenser water box drains

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Harris Nuclear Plant and Harris Energy & Environmental Center
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Prior to condenser maintenance or repairs it is sometimes (approximately twice/year) necessary to drain circulating water to the storm drains (approximately 60,000 gallons per condenser per event) that discharge to Harris Lake. This water is monitored for selected cooling tower blowdown parameters.

d. Filtered water storage tank

Water from the upflow filter clearwell is treated using a micro-filtration unit for turbidity control and then stored in a tank prior to subsequent filtration (nano-filtration unit) and disinfection. Occasionally, some water from this tank may be drained to the storm drains that discharge to Harris Lake. This water may contain trace amounts of chlorine.

e. Fire protection system

Approximately 5000 gallons of lake water used for annual testing of the fire protection system is routed to most of the storm drains that discharge to Harris Lake. In the event of a fire, additional water could be discharged to storm drains.

f. Condenser hotwell

During outages (approximately once per 18 months) it is necessary to drain the condenser hotwell for condenser maintenance and inspection. Approximately 70,000 gallons of this water resulting from condensed steam is drained to storm drains that discharge to Harris Lake. It may contain trace amounts of ethanolamine, 100 ppb or less of boron, and 100 ppb or less ammonia.

g. Condensate storage tank

Infrequently it is necessary to drain the condensate storage tank for maintenance. Approximately 400,000 gallons per event is drained to storm drains that discharge to Harris Lake. It may contain 200 ppb or less boron, 1000 ppb or less ammonia, and trace hydrazine.

h. Air conditioning system condensate

The condensate from various building air conditioning systems flows to various storm drains to Harris Lake. The volume is generally low and is greatest in the humid summer months.

i. Service water system strainers

Infrequently, when service water strainers located at the makeup pumps from the cooling tower basin are backwashed to remove biofouling organisms or debris, a

Progress Energy Carolinas, Inc.
Harris Nuclear Plant and Harris Energy & Environmental Center
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small volume of service water overflows the basin and runs to the adjacent storm drain that discharge to Harris Lake.

j. Maintenance Activities

During maintenance activities at the facility it may become necessary to drain all or some portion thereof of the following plant systems; normal service water, emergency service water, circulating water, potable water, and demineralized water. Maintenance activities at the facility may also require the hydrostatic flushing of system piping with discharge to the storm drain system. In addition, the facility may find it necessary to wash equipment with demineralized water with the discharge to storm drains

2. Emergency Service Water System

This system primarily provides non-contact cooling water for nuclear safety-related equipment systems and during emergency conditions. The emergency service water system discharges to the auxiliary reservoir which is used as the plant's heat sink during emergency conditions, a feature required by Nuclear Regulatory Commission regulations to provide a reliable supply of cooling water. Under normal operating conditions, the auxiliary and the main reservoirs are isolated from each other; however, the reservoirs may be connected as necessary. In addition to emergency situations, this system is used periodically for testing purposes or for containment cooling as needed. This water may contain traces of chemicals identified for the cooling tower blowdown.

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Harris Nuclear Plant and Harris Energy & Environmental Center
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HARRIS ENERGY & ENVIRONMENTAL CENTER

The Harris Energy & Environmental Center (HE&EC) includes facilities that provide support services (laboratories and training classrooms) for the HNP and other CP&L operations. The sources of wastewater at the HE&EC are domestic waste, conventional laboratory waste, cooling tower blowdown, and potentially radioactive liquid waste from the radiochemistry and metallurgy laboratories. Additionally, floor drains from several shops and storage buildings are routed to the wastewater treatment facility. All waste streams, with the exception of the radiological wastewater, receive treatment in the 0.020 MGD wastewater facility.

Components of the treatment facility include a bar screen, submersible pump station as an influent pump station, three treatment ponds, sand filtration, chlorination and dechlorination, as well as the various lift stations for the HE&EC's various buildings. The pond portion of the treatment facility consists of an aerated pond with a minimum retention time of 10 days followed by a stabilization pond, also with a minimum retention time of 10 days. The third pond is a polishing pond with a minimum 2-day retention time. Effluent from the treatment facility is discharged via the effluent discharge pipe into Harris Lake.

If necessary sludge from the treatment facility will be removed and land applied by a contractor (a contractor for sludge disposal will be chosen when needed). Because the treatment facility receives industrial type waste as well as domestic type waste, the land application of the mixed sludge meets the exemption conditions stipulated as 40 CFR 503.6

Domestic Waste

The maximum domestic waste flow from the HE&EC sanitary facilities is approximately 0.014 MGD. In addition to the approximately 235 permanent employees on the site, the HE&EC, serving as a company training facility and as a visitors' center for the nearby Harris Nuclear Plant, accommodates a fluctuating population (ranging from 0 to 450 additional people per day).

Laboratory Waste

Laboratory waste flow, consisting primarily of rinse water from the chemical, metallurgical, and biological laboratories, is approximately 0.001 MGD. HE&EC personnel are educated in the proper disposal of laboratory wastes and are encouraged to minimize the use of laboratory drains for chemical disposal. Most laboratory chemical wastes and virtually all oily wastes are drummed for off-site disposal. Laboratory wastes that are not drummed may go to one of two 5,000 gallon holding/neutralization tanks for visual inspection and testing before being discharged to the influent pump station.

Cooling Tower Blowdown

Cooling tower blowdown from the HE&EC air conditioning system averages approximately 0.002 MGD. Chemical additives include an algicide (aqueous glutaraldehyde solution) and a

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suspension agent. The treatment and extended retention time in the ponds should ensure no algicide is discharged to Harris Lake.

Radiological Wastewater

The majority of the radiological wastewater results from the cleaning of laboratory glassware. In addition, small quantities of liquid radiochemistry laboratory samples, radioactive metallurgy laboratory wastewater (which is prefiltered with a paper cartridge to remove particulates before disposal), liquids generated from analyses of plant 10 CFR Part 61 samples, and reagents are disposed via the HE&EC radiochemistry laboratory drains to a holding tank. Approximately 5,000 gallons are discharged annually from the holding tank, as allowed by the radioactive materials License No. 092-0218-4, issued by the N.C. Division of Radiation Protection. The effluent from the radiological holding tank combines with the effluent from the sewage treatment plant and discharges into Harris Lake.

Radiochemical analyses are performed prior to release to calculate the total activity in the waste. These analyses include gamma spectrum analysis using intrinsic germanium gamma spectrometry systems, as well as direct analysis for Tritium, Iron-55, Nickel-63 and Strontium-89/90. Individual radionuclides have different release limits, however, the total Tritium activity discharged per calendar year shall not exceed 20 millicuries, and the total activity excluding Tritium discharge per calendar year shall not exceed 5 millicuries.

Additionally, the pH of the wastewater is determined before release. The pH must be between six and nine and is adjusted, if necessary, using 50% sodium hydroxide. The tank is agitated after addition of the sodium hydroxide, and an additional sample is analyzed to verify that the appropriate pH adjustment is achieved.

Stormwater

Stormwater runoff from the HE&EC is composed of parking lot, roof, and lawn drainage. This non-industrial stormwater is not subject to the Phase I stormwater regulations of 40 CFR Part 122.

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Attachment 5

Form 2C - Item VI - Potential Discharges Not Covered by Analysis

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Attachment 5

Form 2C - Item VI Potential Discharges Not Covered By Analysis

Chemical	Quantity (used per year, estimate)	Frequency	Purpose
Ammonia	2000 gallons	As needed	pH control
Ammonium Bisulfite	12,000 gallons	Daily	Cl ₂ removal
BETZ FOAMTROL 1440	100 gallons	As needed	Foam control agent
BETZ Flogard MS6208	1800 gallons	As needed	Corrosion control
BETZ Depositrol PY5200 or BL 5325	7000 gallons	As needed	Corrosion control
BETZ Inhibitor AZ 8104	7000 gallons	As needed	Corrosion control
BETZ Spectrus BD 1500	Amount varies depending on biological activity and temperature of makeup water	As needed	Corrosion control
BETZ Flogard MS 6222	9000 gallons	As needed	Corrosion control
BETZ Polymer 1192	600 gallons	As needed	Corrosion control
Boron	13, 000 lbs	As needed	Reactivity control
Detergent and Waxes	300 – 400 gallons	Weekly	Housekeeping
Ethanolamine	7000 gallons	Daily	Corrosion control
Hydrazine	1000 gallons	Daily	Corrosion control
Polyelectrolytes	200 – 300 gallons	As needed	Water treatment
Sodium Carbonate or Bicarbonate	200 – 300 lbs	As needed	pH adjustment
Sodium hypochlorite (15% solution)	Amount varies depending on biological activity and temperature of makeup water	2 to 3 times / Day	Biocide
Sodium hydroxide (50%)	1,106,800 lbs	As needed	pH control and resin regeneration
Sodium or Potassium Molybdate	100 – 200 gallons	As needed	Corrosion control
Sodium EDTA	100 – 200 gallons	As needed	Corrosion control
Sodium or Potassium	500 lbs	As needed	Corrosion control

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Nitrite			
Sulfuric Acid	815,000 lbs	As needed	pH control and resin regeneration
Potassium Permanganate	200-400 gallons	Daily	Iron Control
50% Citric Acid	200-400 gallons	As needed	System Cleaning
Carbohydrazide		As needed	Corrosion Control
GEBetz AD-20	200-400 gallons	As needed	System Cleaning
GEBetz AK-110	200 -400 gallons	As needed	System Cleaning
GEBetz Kleen MCT-511	200- 400 gallons	As needed	System Cleaning
GEBetz Kleen MCT-103	200-400 gallons	As needed	System Cleaning
GEBetz DCL-32	200-400 gallons	Daily	Chlorine Removal
GEBetz Hypersperse MDC-700	200-400 gallons	Daily	Membrane Deposit Control
GEBetz Flogard POT 80L Zinc Phosphate	200-400 gallons	Daily	Corrosion Control
GEBetz Spectrus 1300	1440 gallons	Daily	Non-oxidizing Biocide
GEBetz DT 1401	2700 gallons	Daily	Buffering Agent
Potassium Persulfate 0.6 M	100 gallons	Daily	Analyzer Reagent
Phosphoric Acid 0.6 M	100 gallons	Daily	Analyzer Reagent

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Attachment 6

Form 2F – Item I Outfall Locations

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Attachment 6
Form 2F – Item 1 Outfall Locations

A. Outfall Number	B. Latitude			C. Longitude			D. Receiving Water
SW-A	35°	38'	25"	78°	57'	14"	Harris Lake
SW-B	35°	38'	07"	78°	57'	07"	Harris Lake
SW-001	35°	38'	17"	78°	57'	03"	Harris Lake
SW-002	35°	38'	09"	78°	57'	00"	Harris Lake
SW-003	35°	38'	05"	78°	56'	57"	Harris Lake
SW-004	35°	37'	48"	78°	56'	50"	Harris Lake
SW-005	35°	37'	47"	78°	57'	11"	Harris Lake
SW-006	35°	37'	37"	78°	57'	13"	Harris Lake
SW-007	35°	37'	45"	78°	57'	31"	Harris Lake
SW-008	35°	38'	08"	78°	57'	36"	Harris Lake
SW-009	35°	38'	08"	78°	57'	32"	Harris Lake

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Attachment 7

Form 2F – Item III Site Drainage Map

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Attachment 8

Form 2F – Item IV – A Narrative Description of Pollutant Sources

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Attachment 8
Form 2F – IV.A. Narrative Description of Pollutant Sources

Outfall Number	Area of Impervious Surface	Total Area Drained
SW-A	0.27 Acres	5.07 Acres
SW-B	1.00 Acres	27.94 Acres
SW-001	8.74	66.05 Acres
SW-002	2.06	14.08 Acres
SW-003	6.58	14.74 Acres
SW-004	1.54	33.27 Acres
SW-005	9.77	11.53 Acres
SW-006	7.45	25.84 Acres
SW-007	1.81	45.15 Acres
SW-008	0.48	9.55 Acres
SW-009	1.24	8.72 Acres

Attachment 9

Form 2F – Item IV-B Narrative Description of Pollutant Sources

Taken from Harris Nuclear Plant's
Storm Water Pollution Prevention Plan

Material Handling and Storage Practices

Potential sources of pollutants to storm water discharges include material receiving, storage, and handling areas; waste handling storage, and disposal areas; and runoff from inside the Protected Area. Exposure of pollutants to storm water may be a result of material storage or handling practices, or as a result of spills or leaks. Materials identified as being of greatest significance are lubrication oils, fuel oils, transformer fluids, and chemicals. Secondary containments for oil are maintained in accordance with the Spill Prevention Control and Countermeasure Plan (SPCC Plan).

Material Handling Practices

The majority of materials received at the HNP are brought to the receiving warehouse and temporarily stored in the warehouse. The majority of the materials are then loaded onto a trailer and transferred to the stores issue warehouse, bulk warehouse, or chemical warehouse inside the Protected Area. Bulk quantities of fuel oil are brought into the plant by tanker trucks and unloaded in accordance with the SPCC Plan. Liquid hydrogen, liquid oxygen, liquid chlorine, and polymer are brought to the site by tanker trucks and unloaded at the appropriate storage tank.

Material Storage Practices

Lubrication Oils and Fuel Oil

Major storage locations of fuel oil and lubrication oils are monitored and controlled. Operators perform daily routine checks of oil storage and handling areas inside the Protected Area in accordance with approved plant procedures. Routine transfers of oil from delivery trucks, oil leaks and/or spills are controlled and monitored per the SPCC Plan requirements and implementing plant procedures. Outside storage of oils is contained as per the SPCC Plan.

Solid Waste Handling and Storage

Chemical waste and Used Oil produced inside of the protected area is initially processed in the chemical processing area west of the paint shop. This area is sheltered from the weather and the drains in the area are routed to the Oily Waste Separator for processing.

Used Oil and waste chemical produced outside of the protected area is stored in Warehouse 6 and the Used Oil Storage area located east of the Mobil Equipment Shop. The Used Oil Storage area contains two diked tanks for Used Oil and another diked area for small tanks and drums. Storm water in the diked area is visually inspected before release to the storm water system.

The Central Hazardous Waste Storage Area is located under a shelter attached to the Chemical Warehouse. All satellite hazardous waste storage areas are either under shelters or located in plant buildings. Spill containment devices are used for the material stored under shelters and any storm water which falls into the containment usual is allowed to evaporate. Spill control and response is covered by plant procedures.

Open outside storage containers for wood and metal (steel, copper) recycling are located around the site. The containers are often moved to different work locations. Storm water drains from the bottom of these containers as it is accumulated.

Other recycled material is collect inside of the plant buildings or in covered storage containers. Examples of recycled material include used batteries, aluminum cans, fluorescent lights and printer toner cartridges.

Two closed trash compactors are utilized for sanitary waste. Roll off containers are utilized for wood and other industrial waste. Used of these containers is addressed in the HNP Landfill Waste Management Plan. Covers are used for the roll off containers if the material may contaminate storm water.

Landfills

The plant operated a landfill until December 31, 2002. The cells were closed and covered by December 31, 2003.

Waste material disposed of in the cells included wood, concrete, ashes, rubber, lunch scraps, plastics, paper, constructions rubble, cellulose materials, metals, oil sorbs, dried epoxy paint and paint wastes such as brushes, rollers, empty cans with less than 1 inch of dry solidified paint and dried paint peeled from empty cans if it is contained in a can, dry solidified industrial greases, waste activated charcoal, and waste ion exchange resins.

Attachment 10

Form 2F – Item IV-C Narrative Description of Pollutant Sources

Taken from Harris Nuclear Plant's
Storm Water Pollution Prevention Plan

Site Map - Outfalls and Drainage Areas

Stormwater Outfall No.	Description
SW-1	This outfall which discharges into the finger of the lake north of the causeway receives input starting in the plant yard near the diesel fuel oil storage tanks. It receives water from warehouse roof drains, paved and gravel parking lots, and grassed areas before the outfall.
SW-2	This outfall which discharges into the finger of the lake north of the causeway receives input starting in the plant yard under the plant output transmission lines. It receives input from gravel parking lots and the normal service water pump structure area before the outfall.
SW-3	This outfall which discharges into the finger of the lake north of the causeway receives input from the first few SW-2 inputs as the two are cross tied, the circulating pump intake structure area and paved parking lots before the outfall.
SW-4	This outfall discharges into the main lake. It receives input from the electrical distribution switchyard and the main road along the switchyard. It travels through some open ditches and along a gully before the outfall.
SW-5	This outfall which discharges into the main intake canal at the emergency service water intake structure receives input starting near the turbine building and transformer area. It receives input from plant yard areas both paved and gravel and paved parking lots before the outfall.
SW-6	This outfall discharges into a retention pond with an inverted siphon discharge which travels along an open ditch, crosses a road and travels along a gully before reaching the main lake. It starts at the northwest area of the plant yard and receives input from plant roof drains Units 3 & 4 pit areas, water treatment building, auxiliary boiler area, gas yard, neutralization and settling basin areas, water treatment tank area, both gravel, paved and grass plant yard areas, warehouse roof and drain area drains, and vehicle shop area drains before the outfall.

- SW-7 This outfall discharges into the emergency service water intake channel from the auxiliary reservoir. It receives input from the gas yard, auxiliary boiler fuel oil storage area, settling basin area, and gravel plant yard before entering a ditch that travels to the outfall.
- SW- 8&9 These outfalls discharge into the emergency service water discharge channel to the auxiliary reservoir. Both outfall receive input from plant yard areas that are grassy.
- SW- A&B These outfalls receive input from nonindustrial areas that are grassy.

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COMPANY SHEARON HARRIS
NUCLEAR POWER PLANT STORM
WATER OUTFALL STUDY MARCH 1997**

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