

Thomas D. Gatlin  
Vice President, Nuclear Operations  
803.345.4342

February 1, 2012



Ms. Patty G. Barnes  
NPDES/ND Administration  
Bureau of Water  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, SC 29201

Dear Ms. Foster:

Subject: VIRGIL C. SUMMER NUCLEAR STATION  
NPDES PERMITS NO. SC0030856  
RENEWAL APPLICATION

This letter provides the renewal application for NPDES Permit No. SC0030856 for the Virgil C. Summer Nuclear Station. Included in this package are the following items:

- Completed Application Form 1 – General Information
- Completed Form 2C – Wastewater Discharge Information
- Completed Form 2E – Facilities Which Do Not Discharge Process Wastewater
- Supplement to NPDES Application (with Correct Required Quad Map)
- Sludge Disposal Procedure
- Thermal Mixing Zone Evaluation Report and 2010 Water Quality Monitoring Report
- PQL List
- Mixing Zone Toxicity Supplement

Should there be any questions, please contact Ms. Susan B. Reese at (803) 345-4591.

Very truly yours,

Thomas D. Gatlin

SBR/TDG/ts  
Attachments

c: M. A. Harmon  
M. Coleman  
M. B. Roberts  
J. W. Preston (w/o attachments)  
R. J. White (w/o attachments)  
W. M. Cherry (w/o attachments)  
NRC Resident Inspector (w/o attachments)

Document Control Desk  
RTS (LTD 286, CR-11-05986)  
File (814.07)  
PRSF (RC-12-0019)

COOL  
MRE

SC DHEC  
Attachment I  
LTD 286, CR-11-05986  
RC-12-0019  
Page 1 of 3

# FORM 1



FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		I. EPA I.D. NUMBER	
				S F	
				T/A C D	
				1 2 13 14 15	
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	
		YES	NO	FORM ATTACHED	
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)			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)
		16	17	18	
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			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)
		22	23	24	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		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)
		28	29	30	
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		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)
		34	35	36	
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		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)
		40	41	42	
III. NAME OF FACILITY					
1 SKIP VIRGIL C. SUMMER NUCLEAR STATION					
15 16 - 29 30 59					
IV. FACILITY CONTACT					
A. NAME & TITLE (last, first, & title)					
2 GATLIN THOMAS D. V P NUC OPS					
15 16 45 46 48 49 51 52- 55					
B. PHONE (area code & no.)					
(803) 345-4342					
V. FACILITY MAILING ADDRESS					
A. STREET OR P.O. BOX					
3 P. O. BOX 88					
15 16 45					
B. CITY OR TOWN					
4 JENKINSVILLE					
15 16 40 41 42 47 51					
C. STATE					
SC					
D. ZIP CODE					
29065					
VI. FACILITY LOCATION					
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER					
5 HIGHWAY 215					
15 16 45					
B. COUNTY NAME					
FAIRFIELD					
46 70					
C. CITY OR TOWN					
6 JENKINSVILLE					
15 16 40 41 42 47 51 52 -54					
D. STATE					
SC					
E. ZIP CODE					
29065					
F. COUNTY CODE (if known)					

VII. SIC CODES (4-digit, in order of priority)															B. SECOND														
A. FIRST																													
7 4911 (specify) ELECTRIC UTILITY															7 (specify)														
15 16 - 19															15 16 - 19														
C. THIRD															D. FOURTH														
7 (specify)															7 (specify)														
15 16 - 19															15 16 - 19														
VIII. OPERATOR INFORMATION																													
A. NAME																													
8 S O U T H C A R O L I N A E L E C T R I C & G A S C O M P A N Y																													
15 16																													
B. Is the name listed in Item VIII-A also the owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																													
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)																													
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)																													
P (specify)																													
56																													
D. PHONE (area code & no.)																													
A (803) 345-4342																													
15 16 - 18 19 - 21 22 - 26																													
E. STREET OR P.O. BOX																													
P. O. B O X 8 8																													
26																													
F. CITY OR TOWN																													
B J E N K I N S V I L L E																													
15 16																													
G. STATE																													
SC																													
H. ZIP CODE																													
29065																													
40 41 42 43 44 45 46 47 48 49 50 51 52																													
IX. INDIAN LAND																													
Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																													
52																													
X. EXISTING ENVIRONMENTAL PERMITS																													
A. NPDES (Discharges to Surface Water)																													
C T I																													
9 N S C 0 0 3 0 8 5 6																													
15 16 17 18																													
D. PSD (Air Emissions from Proposed Sources)																													
C T I																													
9 P																													
15 16 17 18																													
B. UIC (Underground Injection of Fluids)																													
C T I																													
9 U																													
15 16 17 18																													
E. OTHER (specify)																													
C M 1 0 0 0 - 0 0 1 2 (specify)																													
30																													
AIR QUALITY PERMIT																													
C. RCRA (Hazardous Wastes)																													
C T I																													
9 R I N T E R I M S T A T U S																													
15 16 17 18																													
E. OTHER (specify)																													
(specify)																													
30																													
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)																													
GENERATION OF ELECTRICITY, NUCLEAR REACTOR																													
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)																													
THOMAS D. GATLIN																													
VICE PRESIDENT, NUCLEAR OPERATIONS																													
B. SIGNATURE																													
[Signature] for TDGATLIN																													
C. DATE SIGNED																													
2/1/12																													
COMMENTS FOR OFFICIAL USE ONLY																													
C																													
C																													
15 16 17 18																													

SC DHEC  
Attachment II  
LTD 286, CR-11-05986  
RC-12-0019  
Page 1 of 101

# FORM 2C

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

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

Please print or type in the unshaded areas only.

FORM  
**2C**  
NPDESU.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.	
001	34.00	17.00	44.00	81.00	18.00	31.00	Monticello Reservoir
003	34.00	17.00	54.00	81.00	18.00	55.00	Broad River via Penstocks of Fairfield
							Hydro

**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	
001	Once-through cooling water		Discharge to surface water	4-A	
	Main condensers	691,200,000 gpd			
	Other cooling services	77,760,000 gpd			
	Total Outfall 001	768,960,000			
003	Reactor water processing		Reactor grade water		
	Reactor grade water (1)		Waste holding tanks	X-X	
	Non-reactor grade floor drains	20,000 gpd	Evaporation	1-F	
	and laundry and hot shower drains		Ion exchange	2-J	
	Total Outfall 003	20,000 gpd	Reuse/recycle (alternate)	4-C	
			Waste monitor tank	X-X	
			Discharge to surface water	4-A	
			Non-reactor grade drains		
			Waste holding tanks	X-X	
			Ion exchange	2-J	
			Waste monitor tank	X-X	
			Discharges to surface water	4-A	

OFFICIAL USE ONLY (effluent guidelines sub-categories)

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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.	
004	34.00	17.00	54.00	81.00	18.00	56.00	Monticello 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	
004	Steam generator blowdown		Steam generator blowdown (2)		
	Steam generator blowdown		Waste monitoring	X-X	
	Blowdown system sump		Discharge to surface water (alternate)	4-A	
	Total Outfall 004	144,000 gpd	Sedimentation	1-U	
			Reuse/recycle	4-C	
			Blowdown system sump (3)		
			Waste holding tank	X-X	
			Ion exchange	2-J	
			Reuse/recycle	4-C	
			Waste monitor tank (alternate)	X-X	
			Discharge to surface water via Outfall 001 (alternate)	4-A	

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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.	
006A	34.00	17.00	40.00	81.00	18.00	39.00	Monticello Reservoir
006B	34.00	17.00	40.00	81.00	18.00	37.00	Monticello 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	
006A	Low volume waste (alum sludge basin)		Sedimentation	1-U	
	Condensate polisher backwash		Discharge to surface water via Outfall 014	4-A	
	Clarifier blowdown				
	Carbon filter backwash				
	Gravity filter backwash				
	Steam generator backwash (alt.)				
	Condensate Storage Tank (alt.)				
	Total Outfall 006A	80,000 gpd			
006B	Low volume waste (plant surge basin)		Flow equalization (collecting sump)	X-X	
	Turbine room sump		Sedimentation	1-U	
	Main condenser cleaning sump				
	Boiler house drains		Oil skimming	X-X	
	Diesel generator building sump		Discharge to surface water via Outfall 014	4-A	
	Circ. water pump house sump				
	Condensate storage tank (alt.)				
	Fuel oil handling drains				
	Transformer area drains				
	Total Outfall 006B	50,000 gpd			

OFFICIAL USE ONLY (effluent guidelines sub-categories)



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FORM  
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NPDESU.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.	
007	34.00	17.00	52.00	81.00	18.00	52.00	Monticello Reservoir
008	34.00	17.00	40.00	81.00	18.00	40.00	Monticello 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	
007	Low volume waste		Flow equalization	X-X	
	(Neutralization waste tank)		Neutralization	2-K	
	Ion exchange regenerations		Discharges to surface water via Outfall 001	4-A	
	Chemical feed equipment drain sump				
	Caustic tank area sump				
	IB bldg. sump "D" battery room				
	Total Outfall 007	80,000 gpd			
008	Chemical cleaning waste/low volume		Neutralization basin (metal cleaning only)	2-K	
	waste (Plant startup waste holding		Sedimentation	1-U	
	basin (4)		Discharge to surface water via Outfall 014	4-A	
	Metal cleaning waste				
	Low volume waste from oil		Flow equalization (collecting sump)	X-X	
	collection sump (006B)		Sedimentation	1-U	
	Low volume wster from clarifier				
	blowdown sump (006A)				
	Chemical cleaning waste				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

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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.	
012	34.00	17.00	54.00	81.00	19.00	19.00	Broad River
013	34.00	17.00	39.00	81.00	18.00	32.00	Broad River
014	34.00	17.00	44.00	81.00	18.00	31.00	Monticello 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	
012	North yard drain system	2,880 gpd	Discharges to surface water	4-A	
	Yard drains	*			
	Roof drains	*			
	Refueling water storage tank	*			
	pit drains				
	Industrial & CRDM coolers (009A & B)	8,000 gpd			
	Ground water wells	70,000 gpd			
	Total Outfall 012	80,880 gpd *			
013	Southeast yard drain system	1,440 gpd*	Discharges to surface water	4-A	
	Yard drains	*			
	Roof drains	*			
	Waste storage tanks sump				
	Misc. building floor drains				
	Groundwater well	4,400 gpd			
	Total Outfall 013	5,840 gpd			
014	Combination outfall		Discharges to surface water	4-A	
	Outfall 005	10,000 gpd	Sanitary sewage treatment		
	Outfall 006A	80,000 gpd	Low volume waste (alum sludge basin)	4-A	
	Outfall 006B	50,000 gpd	Low volume waste (plant waste surge basin)	4-A	
	Outfall 008	0 gpd	Chemical cleaning waste/Low volume waste	4-A	
	Total Outfall 014	140,000 gpd			
	*Average flow varies with rainfall				

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal? <input checked="" type="checkbox"/> YES (complete the following table) <input type="checkbox"/> NO (go to Section III)								
1. OUTFALL NUMBER (list)	2. OPERATION(s) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		b. TOTAL VOLUME (specify with units)		c. DURATION (in days)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
008	See discussion Outfall 008	N/A	N/A	N/A	N/A	N/A	N/A	N/A
III. PRODUCTION								
A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility? <input checked="" type="checkbox"/> YES (complete Item III-B) <input type="checkbox"/> NO (go to Section IV)								
B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)? <input type="checkbox"/> YES (complete Item III-C) <input checked="" type="checkbox"/> 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. <input type="checkbox"/> YES (complete the following table) <input checked="" type="checkbox"/> 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. <input type="checkbox"/> MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED								

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

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

## 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)

CONTINUED FROM THE FRONT

**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)

Chronic Toxicity Testing for Outfall 014  
Requirement of NPDES Permit No. SC0030856

**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)
General Engineering Laboratory	P. O. Box 30712 Charleston, SC	(843) 556-8171	See attached
Data Resources	3005 Broad River Road Columbia, SC 29210	(803) 561-0331	Biological Oxygen Deman

**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)

Thomas D. Gatlin, Vice President, Nuclear Operations

B. PHONE NO. (area code & no.)

(803) 345-4342

C. SIGNATURE

*Thomas D. Gatlin for TDCATLIN*

D. DATE SIGNED

2/1/12

NPDES FORM 2C

Notes – Item IIA and IIB

- (1) Reactor grade water (244) gpd is normally treated and discharged to the penstocks of Fairfield Hydro together with treated non-reactor grade drains. The alternate pathway is to treat and recycle when possible.
- (2) Steam generator blowdown is normally returned to the condensate system for recovery. Steam generator blowdown can be monitored and discharged to Monticello Reservoir via Outfall 001. The alternate discharge pathway is to Monticello Reservoir via the clarifier blowdown sump and Outfall 006A. If monitoring indicates blowdown is not acceptable for discharge, flow is diverted to the blowdown holdup tank.
- (3) Flow from the blowdown system sump and blowdown holdup tank is normally treated and recycled. The alternate pathway is treatment and discharge to the penstocks of Fairfield Hydro via Outfall 003.
- (4) The plant startup waste holding basin discharges wastes from the cleaning of plant piping and equipment. When not used for this purpose, it is available for use as an alternate to the alum sludge basin for treatment of low volume wastes from the clarifier blowdown sump. The plant startup waste holding basin is identical in capacity and design to the alum sludge basin (Outfall 006A). Low volume wastes from the collecting sump can also be directed to the plant startup waste holding basin by means of the piping connections provided for metal cleaning wastes.



Analyses Performed by General Engineering Laboratories

for V.C. Summer Station NPDES Permit Extension

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**Rad Gas Flow**

*GFPC, Gross A/B, liquid*

Alpha  
Beta

*GFPC, Total Radium, Liquid*

Total Radium

**Rad Radium-226**

*Lucas Cell, Ra226, liquid*

Radium-226

**Ion Chromatography**

*EPA300.0 Bromide Liquid*

Bromide  
Fluoride  
Sulfate

**Mercury Analysis**

*EPA 245.1 Mercury*

Mercury

**Metals Analysis-ICPMS**

*200.8/200.2 NPDES Metals*

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Boron  
Cadmium  
Cobalt  
Copper  
Iron  
Lead  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Selenium  
Silver  
Thallium  
Tin  
Titanium  
Zinc  
Chromium

**Micro-biology**

*EPA 405.1 BOD, 5DAY*

BOD, 5 DAY

**Rapid Flow Analysis (Alpkem)**

*EPA 625 Form 2C BNA Dioxin Screen*  
2,3,7,8-TCDD

EPA 1631E Low Level Mercury Analysis  
Mercury

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**Rapid Flow Analysis (Alpkem)**

*EPA 335.3 Cyanide, Total*

Cyanide, Total

*EPA 420.2 Phenols, Total Liquid*

Total Phenol

**Semi-Volatiles-GC/MS**

*3510/8270C TTO in Liquid*

1,2-Diphenylhydrazine  
2,4,6-Trichlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2,4-Dinitrophenol  
2,4-Dinitrotoluene  
2,6-Dinitrotoluene  
2-Chloronaphthalene  
2-Chlorophenol  
2-Methyl-4,6-dinitrophenol  
2-Nitrophenol  
3,3'-Dichlorobenzidine  
4-Bromophenylphenylether  
4-Chloro-3-methylphenol  
4-Chlorophenylphenylether  
4-Nitrophenol  
Acenaphthene  
Acenaphthylene  
Anthracene  
Benzidine  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(ghi)perylene  
Benzo(k)fluoranthene  
Butylbenzylphthalate  
Chrysene  
Di-n-butylphthalate  
Di-n-octylphthalate  
Dibenzo(a,h)anthracene  
Diethylphthalate  
Dimethylphthalate  
Diphenylamine  
Fluoranthene

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**Semi-Volatiles-GC/MS**

*3510/8270C TTO in Liquid*

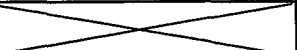
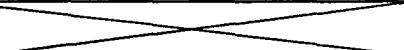
Fluorene  
Hexachlorobenzene  
Hexachlorobutadiene  
Hexachlorocyclopentadiene  
Hexachloroethane  
Indeno(1,2,3-cd)pyrene  
Isophorone  
N-Nitrosodimethylamine  
N-Nitrosodipropylamine  
Naphthalene  
Nitrobenzene  
Pentachlorophenol  
Phenanthrene  
Phenol  
Pyrene  
bis(2-Chloroethoxy)methane  
bis(2-Chloroethyl) ether  
bis(2-Chloroisopropyl)ether  
bis(2-Ethylhexyl)phthalate

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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)	OUTFALL NO. <b>001</b>
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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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	<2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	2.8						1	mg/l				
d. Total Suspended Solids (TSS)	2.4						1	mg/l				
e. Ammonia (as N)	<0.05						1	mg/l				
f. Flow	VALUE	738.7	VALUE		VALUE	660.84	12	MGD		VALUE		
g. Temperature (winter)	VALUE	26.4	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 6.58	MAXIMUM 7.82	MINIMUM	MAXIMUM			12	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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		0.287						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		20.0						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.138						1	mg/l				
f. Nitrate - Nitrite (as N)	X		0.325						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		<0.1						1	mg/l				
h. Oil and Grease		X	<3.94						1	mg/l				
i. Phosphorus (as P) Total (7723-14-0)	X		0.0591						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		6.71						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.05						1	mg/l				
o. Aluminum, Total (7429-90-5)	X		107						1	μg/l				
p. Barium, Total (7440-39-3)	X		15.4						1	μg/l				
q. Boron, Total (7440-42-8)	X		72.9						1	μg/l				
r. Cobalt, Total (7440-48-4)		X	<1.00						1	μg/l				
s. Iron, Total (7439-89-6)	X		0.368						12	mg/l				
t. Magnesium, Total (7439-95-4)	X		1620						1	μg/l				
u. Molybdenum, Total (7439-98-7)	X		5.21						1	μg/l				
v. Manganese, Total (7439-96-5)	X		0.033						12	mg/L				
w. Tin, Total (7440-31-5)		X	<10.0						1	μg/l				
x. Titanium, Total (7440-32-6)		X	<5.0						1	μg/l				

001

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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS		
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>																
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l					
2M. Arsenic, Total (7440-38-2)	X			<5.00						1	µg/l					
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l					
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l					
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l					
6M. Copper, Total (7440-50-8)	X			<1.00						1	µg/l					
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l					
8M. Mercury, Total (7439-97-6)	X			4.26						1	ng/l					
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l					
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l					
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l					
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l					
13M. Zinc, Total (7440-66-6)	X			<10.0						1	µg/l					
14M. Cyanide, Total (57-12-5)	X			<10.0						1	µg/l					
15M. Phenols, Total	X			13.5						1	µg/l					
<b>DIOXIN</b>																
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene. (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be	analyzed	due to high	volatility								
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

001

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloroethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri-chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri-chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro-fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichloro-phenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethyl-phenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitro-phenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachloro-phenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Tri-chlorophenol (88-06-2)	X			<10.0						1	µg/l				



1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVR. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- RATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- RATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloronaphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichlorobenzene (95-50-1)	X			<2.0						1	µg/l				
21B. 1,3-Dichlorobenzene (541-73-1)	X			<2.0						1	µg/l				

001

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.0						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<2.0						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

001

CONTINUED FROM PAGE V-8

CONTINUED FROM PAGE 4

1. POLLUTANT AND CAS NUMBER  (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

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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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.  
003

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	<2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	<1.00						1	mg/l				
d. Total Suspended Solids (TSS)	13.8				1.84		25	mg/l				
e. Ammonia (as N)	<0.050						1	mg/l				
f. Flow	VALUE	0.004600	VALUE		VALUE	0.004344	230	MGD		VALUE		
g. Temperature (winter)	VALUE	27.5	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 6.06	MAXIMUM 8.32	MINIMUM	MAXIMUM			236	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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<0.200						1	mg/l				
b. Chlorine Total Residual		X												
c. Color		X	<5.00						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X	<0.100						1	mg/l				
f. Nitrate - Nitrite (as N)		X	<0.100						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)		X	<0.100						1	mg/l				
h. Oil and Grease	X		1.58						24	mg/l				
i. Phosphorus (as P) Total (7723-14-0)		X	<0.050						1	mg/l				
j. Radioactivity														
(1) Alpha, Total	X		43						1	pci/l				
(2) Beta, Total	X		942						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		890.5						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)		X	<50.0						1	µg/l				
p. Barium, Total (7440-39-3)		X	<2.00						1	µg/l				
q. Boron, Total (7440-42-8)	X		756						1	mg/l				
r. Cobalt, Total (7440-48-4)		X	<1.00						1	µg/l				
s. Iron, Total (7439-89-6)	X		25.3						1	µg/l				
t. Magnesium, Total (7439-95-4)		X	<15.0						1	µg/l				
u. Molybdenum, Total (7439-98-7)		X	<0.500						1	µg/l				
v. Manganese, Total (7439-96-5)		X	<5.00						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.00						1	µg/l				



003

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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<25.0						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			0.02						24	mg/L				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<25.0						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			<10.0						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.0						1	µg/l				
15M. Phenols, Total	X			<5.00						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVR. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(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			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be	analyzed	due to high	volatility								
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

003

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloro-ethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri-chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri-chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro-fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichloro-phenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethyl-phenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitro-phenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachloro-phenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Tri-chlorophenol (88-06-2)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.00						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.00						1	µg/l				

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene) (122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

003

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES <i>(continued)</i>															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						2	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						2	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						2	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						2	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						2	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						2	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						2	µg/l				
25P. Toxaphene (8001-35-2)			X												

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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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

004

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
	CONCENTRATION		CONCENTRATION		CONCENTRATION					CONCENTRATION		
a. Biochemical Oxygen Demand (BOD)	<2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.00						1	mg/l				
c. Total Organic Carbon (TOC)	1.84						1	mg/l				
d. Total Suspended Solids (TSS)	1				0.5		5	mg/l				
e. Ammonia (as N)	0.494						1	mg/l				
f. Flow	VALUE	0.061297	VALUE		VALUE	0.00814	13	MGD		VALUE		
g. Temperature (winter)	VALUE	49	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	<div></div>		1	STANDARD UNITS		<div></div>		
	9.33	9.33										

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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<0.200						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		<5.00						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X	<0.100						1	mg/l				
f. Nitrate - Nitrite (as N)		X	<0.100						1	mg/l				



1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		0.257						1	mg/l				
h. Oil and Grease		X	1.5						5	mg/l				
i. Phosphorus (as P) Total (7723-14-0)		X	<0.050						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X	<0.400						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)		X	<50.0						1	µg/l				
p. Barium, Total (7440-39-3)		X	<2.00						1	µg/l				
q. Boron, Total (7440-42-8)		X	<75.0						1	µg/l				
r. Cobalt, Total (7440-48-4)		X	<1.00						1	µg/l				
s. Iron, Total (7439-89-6)		X	<20.0						1	µg/l				
t. Magnesium, Total (7439-95-4)		X	<15.0						1	µg/l				
u. Molybdenum, Total (7439-98-7)		X	<0.500						1	µg/l				
v. Manganese, Total (7439-96-5)		X	<5.00						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.0						1	µg/l				

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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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.0						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			<1.00						1	µg/l				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			<10.0						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.0						1	µg/l				
15M. Phenols, Total	X			<10.0						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1784-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be	analyzed	due to high	volatility								
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

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CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVR. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetra- chloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloro- ethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans- Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri- chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri- chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro- fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichloro- phenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethyl- phenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O- Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitro- phenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M- Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachloro- phenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Tri- chlorophenol (88-06-2)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(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)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100						1	µg/l				
5B. Benzo (a) Anthracene (58-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.00						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.00						1	µg/l				

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>																
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10.0						1	µg/l					
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l					
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l					
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			<2.00						1	µg/l					
<b>GC/MS FRACTION - PESTICIDES</b>																
1P. Aldrin (309-00-2)			X													
2P. α-BHC (319-84-6)			X													
3P. β-BHC (319-85-7)			X													
4P. γ-BHC (58-89-9)			X													
5P. δ-BHC (319-86-8)			X													
6P. Chlordane (57-74-9)			X													
7P. 4,4'- DDT (50-29-3)			X													
8P. 4,4'- DDE (72-55-9)			X													
9P. 4,4'- DDD (72-54-8)			X													
10P. Dieldrin (60-57-1)			X													
11P. α-Endosulfan (115-29-7)			X													
12P. β-Endosulfan (115-29-7)			X													
13P. Endosulfan Sulfate (1031-07-8)			X													
14P. Endrin (72-20-8)			X													
15P. Endrin Aldehyde (7421-93-4)			X													
16P. Heptachlor (76-44-8)			X													

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CONTINUED FROM PAGE V-8

CONTINUED FROM PAGE 4-5

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)				
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS		
GC/MS FRACTION - PESTICIDES (continued)																
17P. Heptachlor Epoxide (1024-57-3)			X													
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l					
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l					
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l					
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l					
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l					
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l					
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l					
25P. Toxaphene (8001-35-2)			X													

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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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

06A

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	2.32						1	mg/l				
d. Total Suspended Solids (TSS)	5				2.82		12	mg/l				
e. Ammonia (as N)	<0.050						1	mg/l				
f. Flow	VALUE	0.208000	VALUE		VALUE	0.05	12	MGD		VALUE		
g. Temperature (winter)	VALUE	11	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	<div></div>		1	STANDARD UNITS		<div></div>		
	7.38	7.38										

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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		0.262						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		10.0						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.147						1	mg/l				
f. Nitrate - Nitrite (as N)	X		0.178						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		0.177						1	mg/l				
h. Oil and Grease	X		10.64						12	mg/l				
i. Phosphorus (as P) Total (7723-14-0)		X	<0.050						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total	X		<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		6.92						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)	X		53.5						1	µg/l				
p. Barium, Total (7440-39-3)	X		13.9						1	µg/l				
q. Boron, Total (7440-42-8)	X		42.6						1	µg/l				
r. Cobalt, Total (7440-48-4)		X	<1.00						1	µg/l				
s. Iron, Total (7439-89-6)	X		84.1						1	µg/l				
t. Magnesium, Total (7439-95-4)	X		1520						1	µg/l				
u. Molybdenum, Total (7439-98-7)	X		5.31						1	µg/l				
v. Manganese, Total (7439-96-5)	X		7.2						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.0						1	µg/l				

06A

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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.00						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			<1.00						1	µg/l				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			<10.0						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.00						1	µg/l				
15M. Phenols, Total	X			<5.00						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be analyzed		due to high volatility									
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

06A

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloroethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Trichloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Trichloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro-fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.00						1	µg/l				
2A. 2,4-Dichlorophenol (120-83-2)	X			<10.00						1	µg/l				
3A. 2,4-Dimethylphenol (105-67-9)	X			<10.00						1	µg/l				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.00						1	µg/l				
5A. 2,4-Dinitrophenol (51-28-5)	X			<50.00						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			< 10.00						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			< 10.00						1	µg/l				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.00						1	µg/l				
9A. Pentachlorophenol (87-86-5)	X			< 10.00						1	µg/l				
10A. Phenol (108-95-2)	X			<10.00						1	µg/l				
11A. 2,4,6-Trichlorophenol (88-06-2)	X			< 10.00						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(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)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			< 10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.0						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.0						1	µg/l				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (806-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitrosodiphenylamine (86-30-6)	X			< 10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			< 10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			< 10.0						1	µg/l				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			< 2.00						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												



06A

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- RATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- RATION	(2) MASS	
GC/MS FRACTION - PESTICIDES <i>(continued)</i>															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

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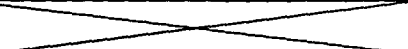
PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

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

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.  
06B

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.16						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	2.67						1	mg/l				
d. Total Suspended Solids (TSS)	10				5.3		12	mg/l				
e. Ammonia (as N)	4.4						1	mg/l				
f. Flow	VALUE 0.451000		VALUE		VALUE 0.037		63	MGD		VALUE		
g. Temperature (winter)	VALUE 18.4		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 7.26	MAXIMUM 7.26	MINIMUM	MAXIMUM			1	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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<0.200						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		<5.00						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X	<0.100						1	mg/l				
f. Nitrate - Nitrite (as N)	X		1.75						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVR. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		<0.500						1	mg/l				
h. Oil and Grease		X	1.8						12	mg/l				
i. Phosphorus (as P) Total (7723-14-0)		X	<0.050						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		3.44						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)		X	<50.0						1	µg/l				
p. Barium, Total (7440-39-3)	X		9.59						1	µg/l				
q. Boron, Total (7440-42-8)	X		49.3						1	µg/l				
r. Cobalt, Total (7440-48-4)	X		4.4						1	µg/l				
s. Iron, Total (7439-89-6)	X		58						1	µg/l				
t. Magnesium, Total (7439-95-4)	X		1010						1	µg/l				
u. Molybdenum, Total (7439-98-7)	X		2.31						1	µg/l				
v. Manganese, Total (7439-96-5)	X		16.5						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.00						1	µg/l				

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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.0						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.0						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			0.04						12	mg/L				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.0						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			13.7						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			25.7						1	µg/l				
15M. Phenols, Total	X			6.08						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)							
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES				
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>																			
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l								
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l								
3V. Benzene (71-43-2)	X			<2.00						1	µg/l								
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be analyzed due to high volatility															
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l								
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l								
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l								
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l								
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l								
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l								
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l								
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l								
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l								
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l								
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l								
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l								
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l								
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l								
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l								
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l								
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l								

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetra- chloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloro- ethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans- Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri- chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri- chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro- fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichloro- phenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethyl- phenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O- Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitro- phenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M- Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachloro- phenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Tri- chlorophenol (88-06-2)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.00						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.00						1	µg/l				

06B

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				



1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitro- sodiphenylamine (86-30-6)	X			<10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l				
46B. 1,2,4-Trichloro- benzene (120-82-1)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

06B

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES <i>(continued)</i>															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

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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.

## 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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	1.9						1	mg/l				
d. Total Suspended Solids (TSS)	29.9				4.76		14	mg/l				
e. Ammonia (as N)	0.165						1	mg/l				
f. Flow	VALUE 0.230000		VALUE		VALUE 0.0899		66	MGD		VALUE		
g. Temperature (winter)	VALUE 16		VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 6.11	MAXIMUM 8.88	MINIMUM	MAXIMUM	<div></div>		65	STANDARD UNITS		<div></div>		

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			
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	<0.200						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		5						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X	<0.100						1	mg/l				
f. Nitrate - Nitrite (as N)	X		0.203						1	mg/l				

1. POLLUTANT AND CAS NO.  (if available)	2. MARK 'X'		3. EFFLUENT						d.NO. OF ANAL- YSES	4. UNITS		5. INTAKE		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		<0.288						1	mg/l				
h. Oil and Grease	X		5.21						12	mg/l				
i. Phosphorus (as P) Total (7723-14-0)		X	<0.050						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO4) (14808-79-8)	X		420						1	mg/l				
k. Sulfide (as S)	X		<0.100						1	mg/l				
m. Sulfite (as SO3) (14265-45-3)	X		<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)	X		<50.0						1	µg/l				
p. Barium, Total (7440-39-3)	X		8.06						1	µg/l				
q. Boron, Total (7440-42-8)		X	32.9						1	µg/l				
r. Cobalt, Total (7440-48-4)		X	<1.0						1	µg/l				
s. Iron, Total (7439-89-6)	X		174						1	µg/l				
t. Magnesium, Total (7439-95-4)	X		1150						1	µg/l				
u. Molybdenum, Total (7439-98-7)		X	91.3						1	µg/l				
v. Manganese, Total (7439-96-5)	X		<5.0						1	µg/l				
w. Tin, Total (7440-31-5)	X		<50.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.0						1	µg/l				

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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.00						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			3.16						1	µg/l				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.0						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.0						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			14.4						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.00						1	µg/l				
15M. Phenols, Total	X			<5.00						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(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			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis <i>(Chloro- methyl)</i> Ether (542-88-1)	X			Could Not	Be	Analyzed	Due To High	Volatility							
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT								4. UNITS		5. INTAKE (optional)		
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>																
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l					
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<2.00						1	µg/l					
24V. Tetrachloroethylene (127-18-4)	X			<2.00						1	µg/l					
25V. Toluene (108-88-3)	X			<2.00						1	µg/l					
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l					
27V. 1,1,1-Tri-chloroethane (71-55-6)	X			<2.00						1	µg/l					
28V. 1,1,2-Tri-chloroethane (79-00-5)	X			<2.00						1	µg/l					
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l					
30V. Trichloro-fluoromethane (75-69-4)	X			<2.00						1	µg/l					
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l					
<b>GC/MS FRACTION - ACID COMPOUNDS</b>																
1A. 2-Chlorophenol (95-57-8)	X			<10.00						1	µg/l					
2A. 2,4-Dichloro-phenol (120-83-2)	X			<10.00						1	µg/l					
3A. 2,4-Dimethyl-phenol (105-67-9)	X			<10.00						1	µg/l					
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.00						1	µg/l					
5A. 2,4-Dinitro-phenol (51-28-5)	X			<50.00						1	µg/l					
6A. 2-Nitrophenol (88-75-5)	X			< 10.00						1	µg/l					
7A. 4-Nitrophenol (100-02-7)	X			< 10.00						1	µg/l					
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.00						1	µg/l					
9A. Pentachloro-phenol (87-86-5)	X			< 10.00						1	µg/l					
10A. Phenol (108-95-2)	X			<10.00						1	µg/l					
11A. 2,4,6-Tri-chlorophenol (88-06-2)	X			< 10.00						1	µg/l					

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.0						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.0						1	µg/l				



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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (806-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene) (122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (87-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			< 10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			< 10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			< 10.0						1	µg/l				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			< 2.0						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER  (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

PAGE V-9

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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

008

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	EFFLUENT						3. UNITS (specify if blank)	4. INTAKE (optional)					
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)			d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)								mg/l					
b. Chemical Oxygen Demand (COD)								mg/l					
c. Total Organic Carbon (TOC)								mg/l					
d. Total Suspended Solids (TSS)								mg/l					
e. Ammonia (as N)								mg/l					
f. Flow	VALUE	0	VALUE	No Flow In Past	VALUE	26 Months (Oct '09)	0	MGD		VALUE			
g. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE			
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE			
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				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						d.NO. OF ANAL- YSES	4. UNITS		5. INTAKE			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
a. Bromide (24959-67-9)										mg/l					
b. Chlorine Total Residual															
c. Color										PCU					
d. Fecal Coliform															
e. Fluoride (16984-48-8)										mg/l					
f. Nitrate - Nitrite (as N)										mg/l					

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE						
	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 ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES				
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS					
g. Nitrogen, Total Organic (as N)										mg/l								
h. Oil and Grease										mg/l								
i. Phosphorus (as P) Total (7723-14-0)										mg/l								
j. Radioactivity																		
(1) Alpha, Total										pci/l								
(2) Beta, Total										pci/l								
(3) Radium, Total										pci/l								
(4) Radium 226, Total										pci/l								
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)										mg/l								
k. Sulfide (as S)										mg/l								
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)										mg/l								
n. Surfactants										mg/l								
o. Aluminum, Total (7429-90-5)										µg/l								
p. Barium, Total (7440-39-3)										µg/l								
q. Boron, Total (7440-42-8)										µg/l								
r. Cobalt, Total (7440-48-4)										µg/l								
s. Iron, Total (7439-89-6)										µg/l								
t. Magnesium, Total (7439-95-4)										µg/l								
u. Molybdenum, Total (7439-98-7)										µg/l								
v. Manganese, Total (7439-96-5)										µg/l								
w. Tin, Total (7440-31-5)										µg/l								
x. Titanium, Total (7440-32-6)										µg/l								

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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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)											µg/l				
2M. Arsenic, Total (7440-38-2)											µg/l				
3M. Beryllium, Total (7440-41-7)											µg/l				
4M. Cadmium, Total (7440-43-9)											µg/l				
5M. Chromium, Total (7440-47-3)											µg/l				
6M. Copper, Total (7440-50-8)											µg/l				
7M. Lead, Total (7439-92-1)											µg/l				
8M. Mercury, Total (7439-97-6)											µg/l				
9M. Nickel, Total (7440-02-0)											µg/l				
10M. Selenium, Total (7782-49-2)											µg/l				
11M. Silver, Total (7440-22-4)											µg/l				
12M. Thallium, Total (7440-28-0)											µg/l				
13M. Zinc, Total (7440-66-8)											µg/l				
14M. Cyanide, Total (57-12-5)											µg/l				
15M. Phenols, Total											µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1784-01-6)				DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)											µg/l				
2V. Acrylonitrile (107-13-1)											µg/l				
3V. Benzene (71-43-2)											µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)															
5V. Bromoform (75-25-2)											µg/l				
6V. Carbon Tetrachloride (56-23-5)											µg/l				
7V. Chlorobenzene (108-90-7)											µg/l				
8V. Chlorodi- bromomethane (124-48-1)											µg/l				
9V. Chloroethane (75-00-3)											µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)											µg/l				
11V. Chloroform (67-66-3)											µg/l				
12V. Dichloro- bromomethane (75-27-4)											µg/l				
13V. Dichloro- difluoromethane (75-71-8)											µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)											µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)											µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)											µg/l				
17V. 1,2-Dichloro- propane (78-87-5)											µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)											µg/l				
19V. Ethylbenzene (100-41-4)											µg/l				
20V. Methyl Bromide (74-83-9)											µg/l				
21V. Methyl Chloride (74-87-3)											µg/l				

CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)											µg/l				
23V. 1,1,2,2-Tetra- chloroethane (79-34-5)											µg/l				
24V. Tetrachloro- ethylene (127-18-4)											µg/l				
25V. Toluene (108-88-3)											µg/l				
26V. 1,2-Trans- Dichloroethylene (156-60-5)											µg/l				
27V. 1,1,1-Tri- chloroethane (71-55-6)											µg/l				
28V. 1,1,2-Tri- chloroethane (79-00-5)											µg/l				
29V. Trichloro-ethylene (79-01-6)											µg/l				
30V. Trichloro- fluoromethane (75-69-4)											µg/l				
31V. Vinyl Chloride (75-01-4)											µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)											µg/l				
2A. 2,4-Dichloro- phenol (120-83-2)											µg/l				
3A. 2,4-Dimethyl- phenol (105-67-9)											µg/l				
4A. 4,6-Dinitro-O- Cresol (534-52-1)											µg/l				
5A. 2,4-Dinitro- phenol (51-28-5)											µg/l				
6A. 2-Nitrophenol (88-75-5)											µg/l				
7A. 4-Nitrophenol (100-02-7)											µg/l				
8A. P-Chloro-M- Cresol (59-50-7)											µg/l				
9A. Pentachloro- phenol (87-86-5)											µg/l				
10A. Phenol (108-95-2)											µg/l				
11A. 2,4,6-Tri- chlorophenol (88-06-2)											µg/l				



1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
1B. Acenaphthene (83-32-9)											µg/l				
2B. Acenaphthylene (208-96-8)											µg/l				
3B. Anthracene (120-12-7)											µg/l				
4B. Benzidine (92-87-5)											µg/l				
5B. Benzo (a) Anthracene (56-55-3)											µg/l				
6B. Benzo (a) Pyrene (50-32-8)											µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)											µg/l				
8B. Benzo (ghi) Perylene (191-24-2)											µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)											µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)											µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)											µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)											µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)											µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)											µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)											µg/l				
16B. 2-Chloro- naphthalene (91-58-7)											µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)											µg/l				
18B. Chrysene (218-01-9)											µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)											µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)											µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)											µg/l				

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
22B. 1,4-Dichloro- benzene (106-46-7)											µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)											µg/l				
24B. Diethyl Phthalate (84-66-2)											µg/l				
25B. Dimethyl Phthalate (131-11-3)											µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)											µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)											µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)											µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)											µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)											µg/l				
31B. Fluoranthene (206-44-0)											µg/l				
32B. Fluorene (86-73-7)											µg/l				
33B. Hexachloro- benzene (118-74-1)											µg/l				
34B. Hexachloro- butadiene (87-68-3)											µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)											µg/l				
36B. Hexachloro- ethane (67-72-1)											µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)											µg/l				
38B. Isophorone (78-59-1)											µg/l				
39B. Naphthalene (91-20-3)											µg/l				
40B. Nitrobenzene (98-95-3)											µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)											µg/l				
42B. N-Nitrosodi-N- Propylamine. (621-64-7)											µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitrosodiphenylamine (86-30-6)											µg/l				
44B. Phenanthrene (85-01-8)											µg/l				
45B. Pyrene (129-00-0)											µg/l				
46B. 1,2,4-Trichlorobenzene (120-82-1)											µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
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)															

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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - PESTICIDES (continued)</b>															
17P. Heptachlor Epoxide (1024-57-3)															
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)															

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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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.  
012

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
	CONCENTRATION		CONCENTRATION		CONCENTRATION					CONCENTRATION		
a. Biochemical Oxygen Demand (BOD)	<2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	1.86						1	mg/l				
d. Total Suspended Solids (TSS)	4.7				4.2		2	mg/l				
e. Ammonia (as N)	<0.050						1	mg/l				
f. Flow	VALUE	0.045600	VALUE		VALUE	0.0287	12	MGD		VALUE		
g. Temperature (winter)	VALUE	19.7	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			12	STANDARD UNITS				
	7.58	7.87										

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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		0.269						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		5.0						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.263						1	mg/l				
f. Nitrate - Nitrite (as N)	X		0.401						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		1.86						1	mg/l				
h. Oil and Grease		X	1.5						2	mg/l				
i. Phosphorus (as P) Total (7723-14-0)	X		0.0577						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		26.9						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	<0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)		X	<50.0						1	µg/l				
p. Barium, Total (7440-39-3)	X		39.4						1	µg/l				
q. Boron, Total (7440-42-8)	X		42.3						1	µg/l				
r. Cobalt, Total (7440-48-4)		X	<1.0						1	µg/l				
s. Iron, Total (7439-89-6)	X		52						1	µg/l				
t. Magnesium, Total (7439-95-4)	X		3920						1	µg/l				
u. Molybdenum, Total (7439-98-7)	X		5.4						1	µg/l				
v. Manganese, Total (7439-96-5)	X		6.23						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.0						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.00						1	µg/l				

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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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- RATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- RATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.00						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			0.021				0.012		12	mg/L				
7M. Lead, Total (7439-92-1)	X			<2.00						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			67.9						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.0						1	µg/l				
15M. Phenols, Total	X			<5.00						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1784-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>															
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could not be	analyzed	due to high	volatility								
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				



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CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloroethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Trichloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Trichloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloroethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichlorofluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichlorophenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethylphenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitrophenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachlorophenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Trichlorophenol (88-06-2)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.00						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.00						1	µg/l				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l				
46B. 1,2,4-Trichloro-benzene (120-82-1)	X			<2.00						1	µg/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES <i>(continued)</i>															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

PAGE V-9

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.

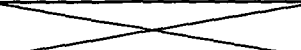
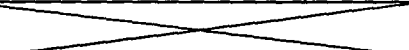
EPA I.D. NUMBER (copy from Item 1 of Form 1)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

013

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	EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.00						1	mg/l				
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l				
c. Total Organic Carbon (TOC)	2.14						1	mg/l				
d. Total Suspended Solids (TSS)	9.90				8.75		2	mg/l				
e. Ammonia (as N)	<0.050						1	mg/l				
f. Flow	VALUE	0.005100	VALUE		VALUE	0.001082	12	MGD		VALUE		
g. Temperature (winter)	VALUE	18.7	VALUE		VALUE		1	°C		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 6.33	MAXIMUM 7.48	MINIMUM	MAXIMUM			7	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		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		0.332						1	mg/l				
b. Chlorine Total Residual		X												
c. Color	X		< 5.0						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.151						1	mg/l				
f. Nitrate - Nitrite (as N)	X		0.368						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT							4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		0.116						1	mg/l				
h. Oil and Grease		X	<4.0						1	mg/l				
i. Phosphorus (as P) Total (7723-14-0)	X		0.052						1	mg/l				
j. Radioactivity														
(1) Alpha, Total		X	<5.00						1	pci/l				
(2) Beta, Total		X	<5.00						1	pci/l				
(3) Radium, Total		X	<1.00						1	pci/l				
(4) Radium 226, Total		X	<1.00						1	pci/l				
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		6.92						1	mg/l				
k. Sulfide (as S)		X	<0.100						1	mg/l				
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l				
n. Surfactants		X	< 0.050						1	mg/l				
o. Aluminum, Total (7429-90-5)		X	< 50.0						1	µg/l				
p. Barium, Total (7440-39-3)	X		15.5						1	µg/l				
q. Boron, Total (7440-42-8)	X		51.2						1	µg/l				
r. Cobalt, Total (7440-48-4)		X	<1.0						1	µg/l				
s. Iron, Total (7439-89-6)	X		124						1	µg/l				
t. Magnesium, Total (7439-95-4)	X		1740						1	µg/l				
u. Molybdenum, Total (7439-98-7)	X		5.53						1	µg/l				
v. Manganese, Total (7439-96-5)	X		< 5.00						1	µg/l				
w. Tin, Total (7440-31-5)		X	<10.00						1	µg/l				
x. Titanium, Total (7440-32-6)		X	<5.0						1	µg/l				

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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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.0						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.0						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			< 0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.0						1	µg/l				
6M. Copper, Total (7440-50-8)	X			0.023				0.01		12	mg/L				
7M. Lead, Total (7439-92-1)	X			<2.0						1	µg/l				
8M. Mercury, Total (7439-97-6)			X	<0.200						1	µg/l				
9M. Nickel, Total (7440-02-0)	X			<2.0						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)	X			0.329				0.12		11	mg/L				
14M. Cyanide, Total (57-12-5)	X			<10.00						1	µg/l				
15M. Phenols, Total	X			<5						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-8)	X			DESCRIBE RESULTS None Detected											



1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	X			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could Not	Be	Analyzed	Due To High	Volatility							
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

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CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloroethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri-chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri-chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro-fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
<b>GC/MS FRACTION - ACID COMPOUNDS</b>															
1A. 2-Chlorophenol (95-57-8)	X			<10.00						1	µg/l				
2A. 2,4-Dichloro-phenol (120-83-2)	X			<10.00						1	µg/l				
3A. 2,4-Dimethyl-phenol (105-67-9)	X			<10.00						1	µg/l				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<10.00						1	µg/l				
5A. 2,4-Dinitro-phenol (51-28-5)	X			<50.00						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			< 10.00						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			< 10.00						1	µg/l				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10.00						1	µg/l				
9A. Pentachloro-phenol (87-86-5)	X			< 10.00						1	µg/l				
10A. Phenol (108-95-2)	X			<10.00						1	µg/l				
11A. 2,4,6-Tri-chlorophenol (88-06-2)	X			< 10.00						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			< 10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.0						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.0						1	µg/l				

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CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			< 10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			< 10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			< 10.0						1	µg/l				
46B. 1,2,4-Trichloro-benzene (120-82-1)	X			< 2.00						1	µg/l				
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												

PAGE V-9

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)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

014

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	EFFLUENT						3. UNITS (specify if blank)	4. INTAKE (optional)					
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		b. LONG TERM AVRG. VALUE (if available)			d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		d. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.00						1	mg/l					
b. Chemical Oxygen Demand (COD)	<20.0						1	mg/l					
c. Total Organic Carbon (TOC)	2.46						1	mg/l					
d. Total Suspended Solids (TSS)	3.1						1	mg/l					
e. Ammonia (as N)	0.126						1	mg/l					
f. Flow	VALUE	0.292603	VALUE		VALUE	0.1003524	12	MGD		VALUE			
g. Temperature (winter)	VALUE	14.7	VALUE		VALUE		1	°C		VALUE			
h. Temperature (summer)	VALUE		VALUE		VALUE		0.3	°C		VALUE			
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			12	STANDARD UNITS					
	6.80	7.58											

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. <i>(if available)</i>	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	X		0.302						1	mg/l				
b. Chlorine Total Residual		X	<0.01					<0.01	12	mg/l				
c. Color	X		15.0						1	PCU				
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X		0.143						1	mg/l				
f. Nitrate - Nitrite <i>(as N)</i>	X		1.03						1	mg/l				

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT								4. UNITS		5. INTAKE		
	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 ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
g. Nitrogen, Total Organic (as N)	X		0.293						1	mg/l					
h. Oil and Grease		X	1.13						1	mg/l					
i. Phosphorus (as P) Total (7723-14-0)	X		4.23				1.76		12	mg/l					
j. Radioactivity															
(1) Alpha, Total		X	<5.00						1	pci/l					
(2) Beta, Total		X	<5.00						1	pci/l					
(3) Radium, Total		X	<1.00						1	pci/l					
(4) Radium 226, Total		X	<1.00						1	pci/l					
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		7.01						1	mg/l					
k. Sulfide (as S)		X	<0.100						1	mg/l					
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	<1.00						1	mg/l					
n. Surfactants		X	<0.050						1	mg/l					
o. Aluminum, Total (7429-90-5)	X		52.9						1	µg/l					
p. Barium, Total (7440-39-3)	X		13.4						1	µg/l					
q. Boron, Total (7440-42-8)	X		43.2						1	µg/l					
r. Cobalt, Total (7440-48-4)		X	<1.00						1	µg/l					
s. Iron, Total (7439-89-6)	X		144						1	µg/l					
t. Magnesium, Total (7439-95-4)	X		1510						1	µg/l					
u. Molybdenum, Total (7439-98-7)	X		4.76						1	µg/l					
v. Manganese, Total (7439-96-5)	X		15						1	µg/l					
w. Tin, Total (7440-31-5)	X		5.2						1	µg/l					
x. Titanium, Total (7440-32-6)		X	<5.0						1	µg/l					



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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. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY AVRG. VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- RATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- RATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)	X			<2.00						1	µg/l				
2M. Arsenic, Total (7440-38-2)	X			<5.00						1	µg/l				
3M. Beryllium, Total (7440-41-7)	X			<0.500						1	µg/l				
4M. Cadmium, Total (7440-43-9)	X			<0.100						1	µg/l				
5M. Chromium, Total (7440-47-3)	X			<3.00						1	µg/l				
6M. Copper, Total (7440-50-8)	X			1.32						1	µg/l				
7M. Lead, Total (7439-92-1)	X			<2.0						1	µg/l				
8M. Mercury, Total (7439-97-6)	X			<0.500						2	ng/l				
9M. Nickel, Total (7440-02-0)	X			<2.00						1	µg/l				
10M. Selenium, Total (7782-49-2)	X			<5.00						1	µg/l				
11M. Silver, Total (7440-22-4)	X			<1.00						1	µg/l				
12M. Thallium, Total (7440-28-0)	X			<0.500						1	µg/l				
13M. Zinc, Total (7440-66-6)		X		5.57						1	µg/l				
14M. Cyanide, Total (57-12-5)	X			<10.00						1	µg/l				
15M. Phenols, Total		X		7.26						1	µg/l				
<b>DIOXIN</b>															
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)	X			DESCRIBE RESULTS None Detected											

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVR. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(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			<5.00						1	µg/l				
2V. Acrylonitrile (107-13-1)	X			<5.00						1	µg/l				
3V. Benzene (71-43-2)	X			<2.00						1	µg/l				
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			Could Not	Be	Analyzed	Due To High	Volatility							
5V. Bromoform (75-25-2)	X			<2.00						1	µg/l				
6V. Carbon Tetrachloride (56-23-5)	X			<2.00						1	µg/l				
7V. Chlorobenzene (108-90-7)	X			<2.00						1	µg/l				
8V. Chlorodi- bromomethane (124-48-1)	X			<2.00						1	µg/l				
9V. Chloroethane (75-00-3)	X			<2.00						1	µg/l				
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			<5.00						1	µg/l				
11V. Chloroform (67-66-3)	X			<2.00						1	µg/l				
12V. Dichloro- bromomethane (75-27-4)	X			<2.00						1	µg/l				
13V. Dichloro- difluoromethane (75-71-8)	X			<2.00						1	µg/l				
14V. 1,1-Dichloro- ethane (75-34-3)	X			<2.00						1	µg/l				
15V. 1,2-Dichloro- ethane (107-06-2)	X			<2.00						1	µg/l				
16V. 1,1-Dichloro- ethylene (75-35-4)	X			<2.00						1	µg/l				
17V. 1,2-Dichloro- propane (78-87-5)	X			<2.00						1	µg/l				
18V. 1,3-Dichloro- propylene (542-75-6)	X			<2.00						1	µg/l				
19V. Ethylbenzene (100-41-4)	X			<2.00						1	µg/l				
20V. Methyl Bromide (74-83-9)	X			<2.00						1	µg/l				
21V. Methyl Chloride (74-87-3)	X			<2.00						1	µg/l				

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CONTINUED FROM PAGE 3 OF FORM 2-C

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X			<2.00						1	µg/l				
23V. 1,1,2,2-Tetra- chloroethane (79-34-5)	X			<2.00						1	µg/l				
24V. Tetrachloro- ethylene (127-18-4)	X			<2.00						1	µg/l				
25V. Toluene (108-88-3)	X			<2.00						1	µg/l				
26V. 1,2-Trans- Dichloroethylene (156-60-5)	X			<2.00						1	µg/l				
27V. 1,1,1-Tri- chloroethane (71-55-6)	X			<2.00						1	µg/l				
28V. 1,1,2-Tri- chloroethane (79-00-5)	X			<2.00						1	µg/l				
29V. Trichloro-ethylene (79-01-6)	X			<2.00						1	µg/l				
30V. Trichloro- fluoromethane (75-69-4)	X			<2.00						1	µg/l				
31V. Vinyl Chloride (75-01-4)	X			<2.00						1	µg/l				
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<10.0						1	µg/l				
2A. 2,4-Dichloro- phenol (120-83-2)	X			<10.0						1	µg/l				
3A. 2,4-Dimethyl- phenol (105-67-9)	X			<10.0						1	µg/l				
4A. 4,6-Dinitro-O- Cresol (534-52-1)	X			<10.0						1	µg/l				
5A. 2,4-Dinitro- phenol (51-28-5)	X			<50.0						1	µg/l				
6A. 2-Nitrophenol (88-75-5)	X			<10.0						1	µg/l				
7A. 4-Nitrophenol (100-02-7)	X			<10.0						1	µg/l				
8A. P-Chloro-M- Cresol (59-50-7)	X			<10.0						1	µg/l				
9A. Pentachloro- phenol (87-86-5)	X			<10.0						1	µg/l				
10A. Phenol (108-95-2)	X			<10.0						1	µg/l				
11A. 2,4,6-Tri- chlorophenol (88-06-2)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10.0						1	µg/l				
2B. Acenaphthylene (208-96-8)	X			<10.0						1	µg/l				
3B. Anthracene (120-12-7)	X			<10.0						1	µg/l				
4B. Benzidine (92-87-5)	X			<100.0						1	µg/l				
5B. Benzo (a) Anthracene (56-55-3)	X			<10.0						1	µg/l				
6B. Benzo (a) Pyrene (50-32-8)	X			<10.0						1	µg/l				
7B. 3,4-Benzo- fluoranthene (205-99-2)	X			<10.0						1	µg/l				
8B. Benzo (ghi) Perylene (191-24-2)	X			<10.0						1	µg/l				
9B. Benzo (k) Fluoranthene (207-08-9)	X			<10.0						1	µg/l				
10B. Bis (2-Chloro- ethoxy) Methane (111-91-1)	X			<10.0						1	µg/l				
11B. Bis (2-Chloro- ethyl) Ether (111-44-4)	X			<10.0						1	µg/l				
12B. Bis (2-Chloroiso- propyl) Ether (102-60-1)	X			<10.0						1	µg/l				
13B. Bis (2-Ethyl- hexyl) Phthalate (117-81-7)	X			<10.0						1	µg/l				
14B. 4-Bromo- phenyl Phenyl Ether (101-55-3)	X			<10.0						1	µg/l				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10.0						1	µg/l				
16B. 2-Chloro- naphthalene (91-58-7)	X			<10.0						1	µg/l				
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)	X			<10.0						1	µg/l				
18B. Chrysene (218-01-9)	X			<10.0						1	µg/l				
19B. Dibenzo (a, h) Anthracene (53-70-3)	X			<10.0						1	µg/l				
20B. 1,2-Dichloro- benzene (95-50-1)	X			<2.0						1	µg/l				
21B. 1,3-Dichloro- benzene (541-73-1)	X			<2.0						1	µg/l				

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
22B. 1,4-Dichloro- benzene (106-46-7)	X			<2.00						1	µg/l				
23B. 3,3-Dichloro- benzidine (91-94-1)	X			<10.0						1	µg/l				
24B. Diethyl Phthalate (84-66-2)	X			<10.0						1	µg/l				
25B. Dimethyl Phthalate (131-11-3)	X			<10.0						1	µg/l				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10.0						1	µg/l				
27B. 2,4-Dinitro- toluene (121-14-2)	X			<10.0						1	µg/l				
28B. 2,6-Dinitro- toluene (606-20-2)	X			<10.0						1	µg/l				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10.0						1	µg/l				
30B. 1,2-Diphenyl- Hydrazine (as Azo- benzene)(122-66-7)	X			<10.0						1	µg/l				
31B. Fluoranthene (206-44-0)	X			<10.0						1	µg/l				
32B. Fluorene (86-73-7)	X			<10.0						1	µg/l				
33B. Hexachloro- benzene (118-74-1)	X			<10.0						1	µg/l				
34B. Hexachloro- butadiene (87-68-3)	X			<10.0						1	µg/l				
35B. Hexachloro- cyclopentadiene (77-47-4)	X			<10.0						1	µg/l				
36B. Hexachloro- ethane (67-72-1)	X			<10.0						1	µg/l				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			<10.0						1	µg/l				
38B. Isophorone (78-59-1)	X			<10.0						1	µg/l				
39B. Naphthalene (91-20-3)	X			<10.0						1	µg/l				
40B. Nitrobenzene (98-95-3)	X			<10.0						1	µg/l				
41B. N-Nitrosodi- methylamine (62-75-9)	X			<10.0						1	µg/l				
42B. N-Nitrosodi-N- Propylamine (621-64-7)	X			<10.0						1	µg/l				

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d.NO. OF ANAL- YSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
43B. N-Nitro- sodiphenylamine (86-30-6)	X			<10.0						1	µg/l				
44B. Phenanthrene (85-01-8)	X			<10.0						1	µg/l				
45B. Pyrene (129-00-0)	X			<10.0						1	µg/l				
46B. 1,2,4-Trichloro- benzene (120-82-1)	X			<2.00						1	µg/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'- DDT (50-29-3)			X												
8P. 4,4'- DDE (72-55-9)			X												
9P. 4,4'- DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

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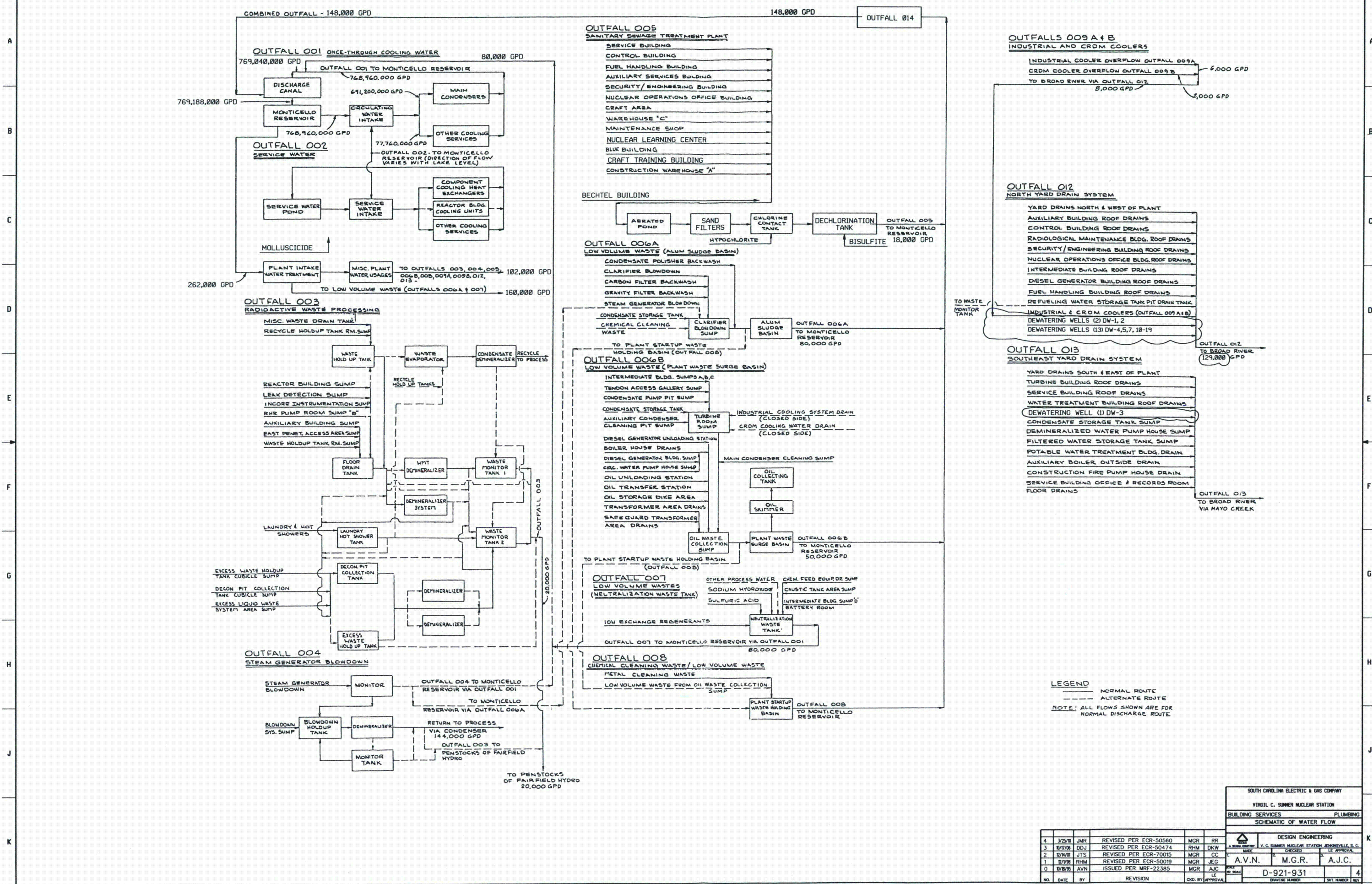
CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TEST- ING RE- QUIRED	b. BE- LIEVED PRESENT	c. BE- LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d.NO. OF ANAL- YSES	a. CONCENT- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b.NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENT- TRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES <i>(continued)</i>															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X	<0.100						1	µg/l				
19P. PCB-1254 (11097-69-1)			X	<0.100						1	µg/l				
20P. PCB-1221 (11104-28-2)			X	<0.100						1	µg/l				
21P. PCB-1232 (11141-16-5)			X	<0.100						1	µg/l				
22P. PCB-1248 (12672-29-6)			X	<0.100						1	µg/l				
23P. PCB-1260 (11096-82-5)			X	<0.100						1	µg/l				
24P. PCB-1016 (12674-11-2)			X	<0.100						1	µg/l				
25P. Toxaphene (8001-35-2)			X												


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# FORM 2C ITEM IIA





**LEGEND**  
— NORMAL ROUTE  
--- ALTERNATE ROUTE  
NOTE: ALL FLOWS SHOWN ARE FOR NORMAL DISCHARGE ROUTE

SOUTH CAROLINA ELECTRIC & GAS COMPANY											
VIRGIL C. SUMMER NUCLEAR STATION											
BUILDING SERVICES						PLUMBING					
SCHEMATIC OF WATER FLOW											
DESIGN ENGINEERING											
4	3/25/78	JMR	REVISED PER ECR-50560	MGR	RR	1	 Y. C. SUMMER NUCLEAR STATION, JENKINSVILLE, S.C.	2	3/25/78	JMR	DESIGNED
3	1/17/78	DDJ	REVISED PER ECR-50474	RHM	DKW	2		3	1/17/78	DDJ	CHECKED
2	1/14/78	JTS	REVISED PER ECR-70015	MGR	CC	3		4	1/14/78	JTS	APPROVED
1	1/1/78	RHM	REVISED PER ECR-50019	MGR	JEG	4		5	1/1/78	RHM	ISSUED
0	1/1/78	AVN	ISSUED PER MRF-22385	MGR	AJC	5		6	1/1/78	AVN	ISSUED
NO. DATE BY REVISION				CHK. BY APPROVAL				DRAWING NUMBER			
								D-921-931			
								SHEET NUMBER			
								4			



TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-011	Main Steam (Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 003 008 014
D-302-012	Main Steam (Non- Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-014	Main and Reheat Steam (Non-Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-031	Main Steam Dump System	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-041	Extraction Steam	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-051	Auxiliary Steam	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 003 008 014
D-302-081	Feedwater (Non-Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-082	Feedwater (Non-Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-083	Feedwater (Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 003 008 014

TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-085	Emergency Feedwater (Nuclear)	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 003 008 014
D-302-101	Condensate	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-102	Condensate-Auxiliary Condensers and Blowdown Heat Exhangers	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-103	Condensate Polishers	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 006A 014
D-302-111	High Pressure Heater Drips, Vents and Reliefs	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-112	High Pressure Heater Drips, Vents and Reliefs	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-113	Low Pressure Heater Drips, Vents and Reliefs	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-121	Main Steam Drains	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-122	Feed Pump Start-Up, Extraction and Misc. Steam Drains	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014

TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-123	Misc. Steam Drains	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-124	Extraction Steam Drains	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-125	Scavenging Steam Drains	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-131	Condenser Air Removal	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-141	Turbine Gland Steam	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-161	Pretreatment and Sterile Water	Zinc Sulfate (Betz MS-200P) Soda Ash Aluminum Sulfate Gaseous Chlorine Clay, Polymer (Betz 1190) Tetrasodium Pyrophosphate (Betz-30K) Sodium Bicarbonate	006B 008 014
D-302-163	Cycle Makeup Demineralizers	Sodium Hydroxide Sulfuric Acid	007 001
D-302-165	Condensate Polishing	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006A 006B 008 014
D-302-171	Chemical Feed Condensate Steam Generator Standby	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014

TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-172	Chemical Feed Auxiliary Boiler and Ammonia Storage	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-181	Turbine Cycle Sampling	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-182	Generator Sampling and Turbine Cycle Sample Rack And Recorder – Analyzer Panel	Ammonia Hydrazine Methoxypropylamine Carbohydrazide Boron (Boric Acid)	006B 008 014
D-302-221 D-302-222	Service Water	Chlorine Sodium Hypochlorite Zinc Sulfate (Betz MS-200P) Spectrus CT1300 Polymer (Betz 1190) Sodium Metasilicate Betz Depositrol (PY5206) Betz Dianodic (DN2300) Betz Flowgard (MS6201)	003 Service Water Pond
D-302-224	Turbine Room Closed Cycle Cooling Water	Calgon-CS (Sodium Nitrate/ Sodium Borate)	006B 008 014
D-302-281	Fuel Oil	BIOBOR JF	006B 008 014
D-302-351	Diesel Generator – Fuel Oil	BIOBOR JF	006B 008 014
D-302-601	Reactor Coolant	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)	003
D-302-602	Reactor Coolant	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)	003

## TABULATION FOR CHEMICALS USED IN VARIOUS SYSTEMS

[illegible]

## TABULATION FOR CHEMICALS USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-612	Component Cooling System Inside Reactor Building	Potassium Chromate Potassium Hydroxide Potassium diChromate  <u>Alternate Treatment 1</u> Sodium Nitrite Boric Acid Sodium Bicarbonate Benzotriazole Calgon H-303 Calgon H-450  <u>Alternate Treatment 2</u> Sodium Molybdate Dihydrate Sodium Nitrite Benzotriazole Hydroxyethylidenediphosphon ate (HEDP) Polyacrylate	003
D-302-613  D-302-613  (cont'd)	Component Cooling System Non-Essential Equipment Cooling          <u>"Drain Permit Required due to Chemicals used"</u>	Potassium Chromate Potassium Hydroxide Potassium diChromate  <u>Alternate Treatment 1</u> Sodium Nitrite Boric Acid Sodium Bicarbonate Benzotriazole Calgon H-303 Calgon H-450  <u>Alternate Treatment 2</u> Sodium Molybdate Dihydrate Sodium Nitrite Benzotriazole Hydroxyethylidenediphosphon ate (HEDP) Polyacrylate	003

## TABULATION FOR CHEMICALS USED IN VARIOUS SYSTEMS

[illegible]



TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
E-302-674	Chemical and Volume Control	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)	003
E-302-675	Chemical and Volume Control	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)	003
E-302-676	Chemical and Volume Control	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)  BTRS Chill Water -Potassium Chromate -Potassium diChromate -Potassium Hydroxide  <u>Alternate 1</u> Sodium Molybdate Dihydrate Sodium Nitrite Benzotriazole Hydroxyethylidenediphosphate (HEDP) Polyacrylate  <u>Alternate 2</u> Sodium Nitrite Borax Sodium Bicarbonate Calgon H-303 Calgon H-450 Benzotriazole	003
E-302-677	Chemical and Volume Control	Lithium Hydroxide Boron (Boric Acid) Hydrogen Peroxide (during shutdown) Hydrazine (during shutdown)	003

TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
E-302-691	Safety Injection	Boric Acid	003
E-302-692	Safety Injection	Boric Acid	003
E-302-693	Safety Injection	Boric Acid	003
D-302-734	Excess Liquid Waste Processing and Storage System	Sodium Hydroxide Boron (Boric Acid)  Duratek IRN-77 resin IRN-78 resin IRN-150 media and solution	003
E-302-735	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-736	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-737	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-738	Waste Processing	Sodium Hydroxide Boric Acid  Duratek IRN-77 resin IRN-78 resin IRN-150 media and solution	003
E-302-741	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-742	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-743	Waste Processing	Sodium Hydroxide Boric Acid	003
E-302-751	Boron Recycle	Boric Acid	003
D-302-771	Nuclear Sampling	Boric Acid Lithium Hydroxide	003
D-302-772	Normal and Post Accident Sampling	Sodium Hydroxide Mannitol pH 9 Buffer Boron (Boric Acid)	003
D-302-782	Nuclear Blowdown Processing System Hold-Up Tank and Demineralizers	Ammonia Hydrazine Boric Acid Methoxypropylamine Carbohydrazide	006A 004 008 014

TABULATION FOR CHEMICALS  
USED IN VARIOUS SYSTEMS

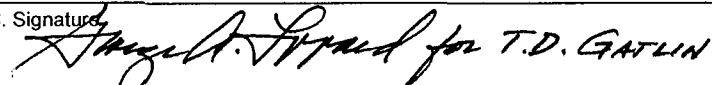
FLOW DIAGRAM	TITLE	CHEMICAL USED IN SYSTEM	OUTFALL
D-302-783	Nuclear Blowdown Processing System Spent Resin Storage Tank	Ammonia Hydrazine Boric Acid Methoxypropylamine Carbohydrazide	003 004 001
D-302-824	Reactor Building Cooling Unit Drains	Potential of Sodium Metasilicate from industrial Cooling System CT-2	003
D-302-841	Chilled Water – Pump and Chiller Area	Calgon-CS	003
D-302-842	Chilled Water – To Cooling Coils "A"	Calgon-CS	003
D-302-843	Chilled Water – To Cooling Coils "B"	Calgon-CS	003
D-302-844	Chilled Water – Turbine Room	Calgon-CS	006B 008 014
D-302-851	Industrial Cooling Water	Sodium Metasilicate (Tube side) or Open side	003 (014) 012
D-302-852	CRDM Cooling Water	Sodium Metasilicate	003 (014) 012
D-302-223	Turbine Building Closed Cycle Cooling Tower	BL5300 Spectrus CT1300 Spectrus OX1200	001

\*\*During the addition of Spectrus, discharge is secured until concentration of CT1300 is less than detectable.

SC DHEC  
Attachment IV  
LTD 286, CR-11-05986  
RC-12-0019  
Page 1 of 3

# FORM 2E

Please print or type in the unshaded areas only.		EPA ID Number (copy from Item 1 of Form 1)		Form Approved. OMB No. 2040-0086. Approval expires 5-31-92.			
FORM <div style="font-size: 2em; font-weight: bold;">2E</div> NPDES		<div style="display: inline-block; vertical-align: middle;"> <h2 style="margin: 0;">Facilities Which Do Not Discharge Process Wastewater</h2> </div>					
<b>I. RECEIVING WATERS</b>							
For this outfall, list the latitude and longitude, and name of the receiving water(s).							
Outfall Number (list)	Latitude			Longitude		Receiving Water (name)	
	Deg	Min	Sec	Deg	Min	Sec	
005	34	17	41	81	18	40	Monticello Reservoir via Outfall 014
<b>II. DISCHARGE DATE</b> (If a new discharger, the date you expect to begin discharging)							
<b>III. TYPE OF WASTE</b>							
A. Check the box(es) indicating the general type(s) of wastes discharged.							
<input checked="" type="checkbox"/> Sanitary Wastes <input type="checkbox"/> Restaurant or Cafeteria Wastes <input type="checkbox"/> Noncontact Cooling Water <input type="checkbox"/> Other Nonprocess Wastewater (Identify)							
B. If any cooling water additives are used, list them here. Briefly describe their composition if this information is available.							
NONE.							
<b>IV. EFFLUENT CHARACTERISTICS</b>							
<b>A. Existing Sources</b> — Provide measurements for the parameters listed in the left-hand column below, unless waived by the permitting authority (see instructions). <b>B. New Dischargers</b> — Provide estimates for the parameters listed in the left-hand column below, unless waived by the permitting authority. Instead of the number of measurements taken, provide the source of estimated values (see instructions).							
Pollutant or Parameter	(1) Maximum Daily Value (include units)		(2) Average Daily Value (last year) (include units)		(3) Number of Measurements Taken (last year)	(4) Source of Estimate (if new discharger)	
	Mass	Concentration	Mass	Concentration			
Biochemical Oxygen Demand (BOD)	14.71 LBS	26 PPM	0.57 LBS	12.2 PPM	11		
Total Suspended Solids (TSS)	9.53 LBS	16.8 PPM	0.44 LBS	9.5 PPM	11		
Fecal Coliform (if believed present or if sanitary waste is discharged)	N/A	2ct/100 ml	N/A	1.64ct/100ml	11		
Total Residual Chlorine (if chlorine is used)							
Oil and Grease	1.17 LBS	2.06 PPM			1		
*Chemical oxygen demand (COD)	37.77 LBS	66.6 PPM			1		
*Total organic carbon (TOC)	9.87 LBS	17.4 PPM			1		
Ammonia (as N)	17.98 LBS	31.7 PPM			1		
Discharge Flow	Value 0.028900 MGD		0.005000 MGD		59		
pH (give range)	Value 6.92				1		
Temperature (Winter)	15.3 °C		°C		1		
Temperature (Summer)	°C		°C				
*If noncontact cooling water is discharged							

<b>V. Except for leaks or spills, will the discharge described in this form be intermittent or seasonal?</b>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, briefly describe the frequency of flow and duration.		
<b>VI. TREATMENT SYSTEM</b> (Describe briefly any treatment system(s) used or to be used)		
See attached description.		
<b>VII. OTHER INFORMATION</b> (Optional)		
Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations. Attach additional sheets, if necessary.		
<b>VIII. CERTIFICATION</b>		
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.		
<b>A. Name &amp; Official Title</b> Thomas D. Gatlin, Vice President, Nuclear Operations		<b>B. Phone No. (area code &amp; no.)</b> (803) 345-4342
<b>C. Signature</b> 		<b>D. Date Signed</b> 2/1/12

# LOCATION SUPPLEMENT AND DESCRIPTION OF OUTFALLS

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF WATER**

**LOCATION SUPPLEMENT FOR ND AND NPDES PERMIT APPLICATIONS**

FACILITY: Virgil C. Summer Nuclear Station                      DATE: 01/24/2012

ITEM 1:        Please give a short description of the plant location, if the address is not a specific location.  
Example: Plant is located at the interchange of Interstate 26 and U.S. Highway #1.

Plant is located approximately 1.5 miles west of Highway 215 at Bradham Blvd.

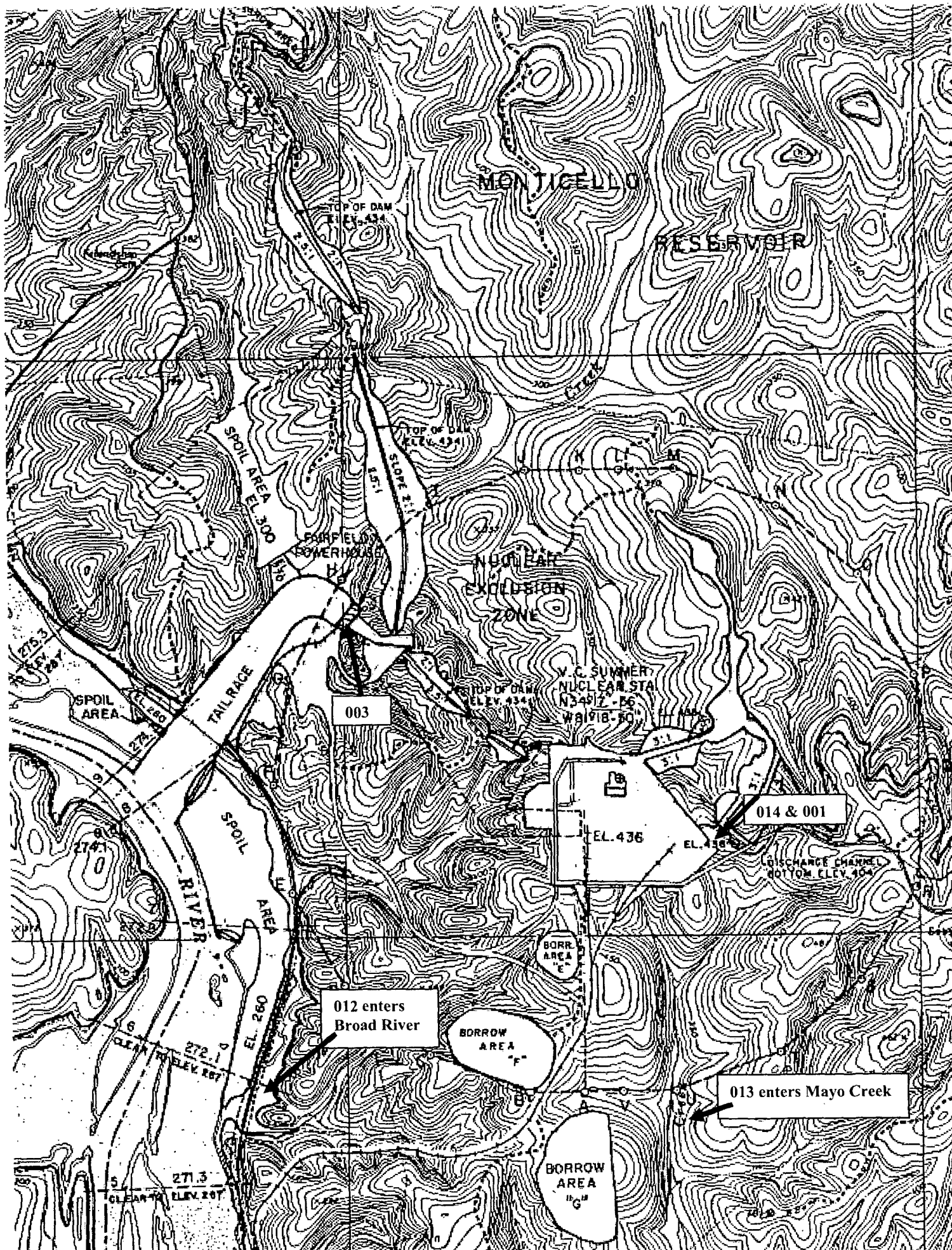
ITEM 2:        Please give a description of the location of the discharge point into the receiving stream using some landmark as a reference point, i.e., bridge, stream, road junction, the plant itself, etc. Give the direction and the distance in feet from the reference point. Example: Discharge #001 is into Johnny Creek approximately 300 feet directly behind the plant. Discharge #002 is into Doris Creek 150 feet downstream from U.S. Highway #30 bridge.

See attached descriptions of NPDES Outfalls.

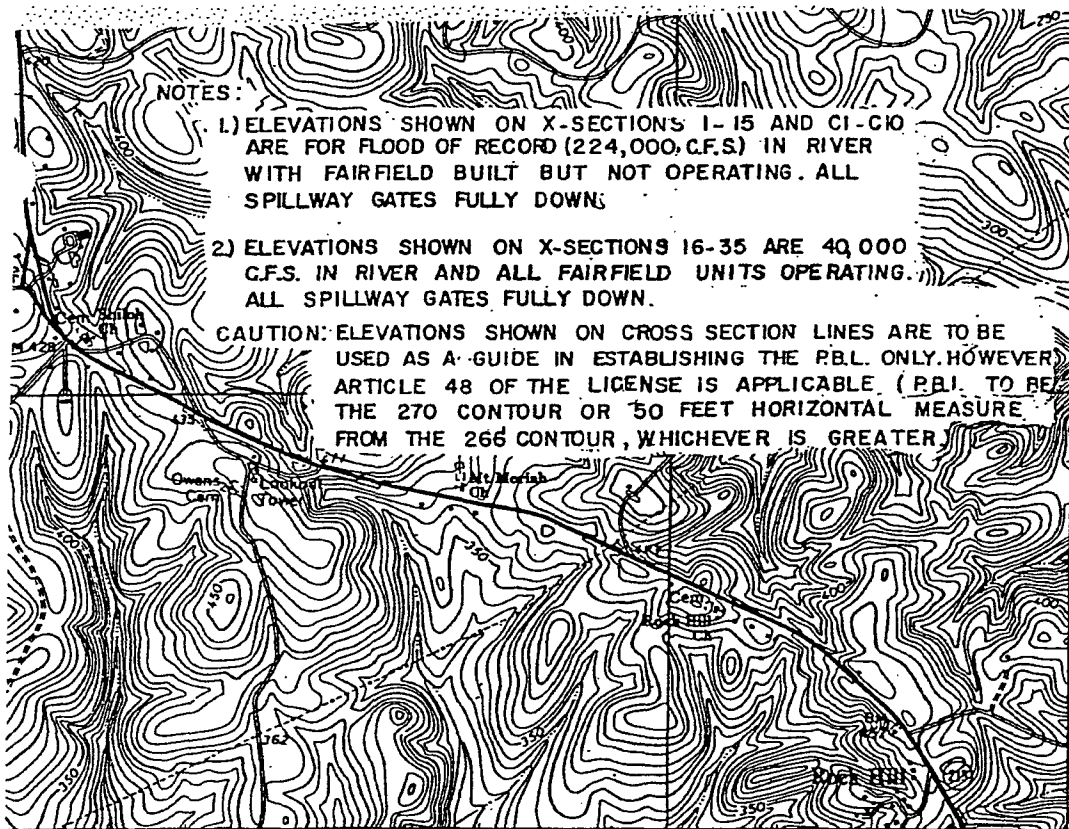
ITEM 3:        Please locate the discharge on a U.S. Geological Survey 7 1/2 minute quad sheet (or a 15 minute quad if a 7 1/2 quad is not available for the area). The entire quad sheet need not be submitted. An 8 1/2 by 11 inch photocopy of the applicable portion of the map is sufficient. The quad sheet name must be provided on the copy submitted to the Department. USGS Maps are available at the SC Dept. Of Natural Resources/Map Division, 2221 Devine Street, Suite 222, Columbia, SC 29205. Phone number is 734-9108.

RETURN TO:        SCDHEC  
                      Bureau of Water  
                      NPDES Administration  
                      2600 Bull Street  
                      Columbia, SC 29201









NOTES:

1) ELEVATIONS SHOWN ON X-SECTIONS 1-15 AND C1-C10 ARE FOR FLOOD OF RECORD (224,000 C.F.S.) IN RIVER WITH FAIRFIELD BUILT BUT NOT OPERATING. ALL SPILLWAY GATES FULLY DOWN.

2) ELEVATIONS SHOWN ON X-SECTIONS 16-35 ARE 40,000 C.F.S. IN RIVER AND ALL FAIRFIELD UNITS OPERATING. ALL SPILLWAY GATES FULLY DOWN.

CAUTION: ELEVATIONS SHOWN ON CROSS SECTION LINES ARE TO BE USED AS A GUIDE IN ESTABLISHING THE P.B.L. ONLY. HOWEVER, ARTICLE 48 OF THE LICENSE IS APPLICABLE (P.B.L. TO BE THE 270 CONTOUR OR 50 FEET HORIZONTAL MEASURE FROM THE 266 CONTOUR, WHICHEVER IS GREATER).

ROAD CLASSIFICATION

Primary highway,  
hard surface

Light-duty road, hard or  
improved surface

Secondary highway,  
hard surface

Unimproved road



Interstate Route



U. S. Route



State Route



QUADRANGLE LOCATION

JENKINSVILLE, S. C.

N3415—W8115/7.5

1969

AMS 4752 IV SE —SERIES V846

E1,920,000

34°15'

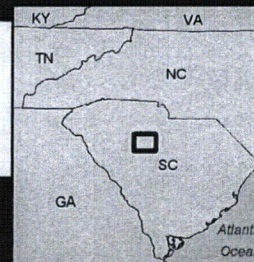
81°15'

RIGHTED  
4752 II NW

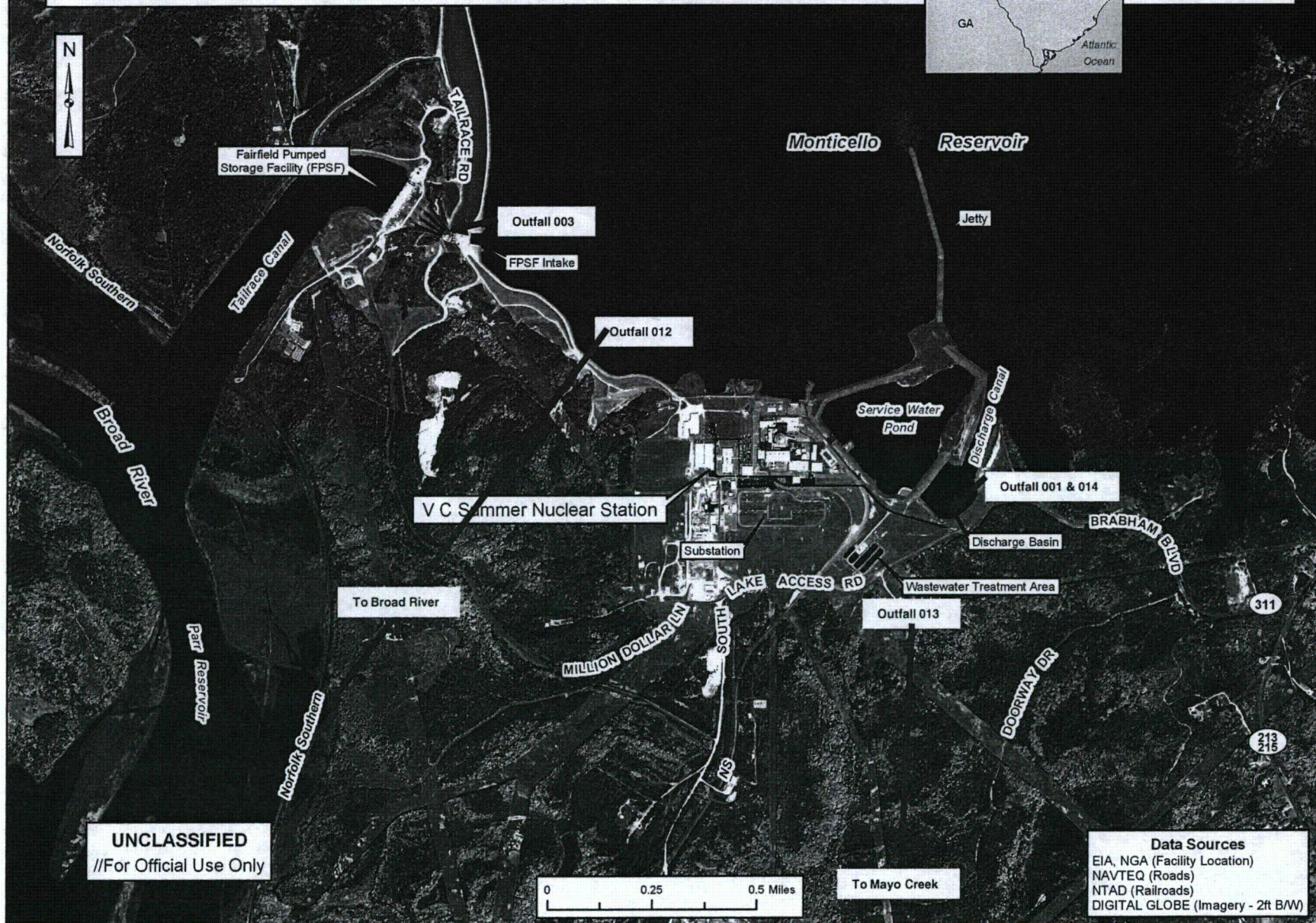


# Virgil C Summer Nuclear Station - Jenkinsville, SC

Medium Scale Image Graphic



UNCLASSIFIED  
//For Official Use Only



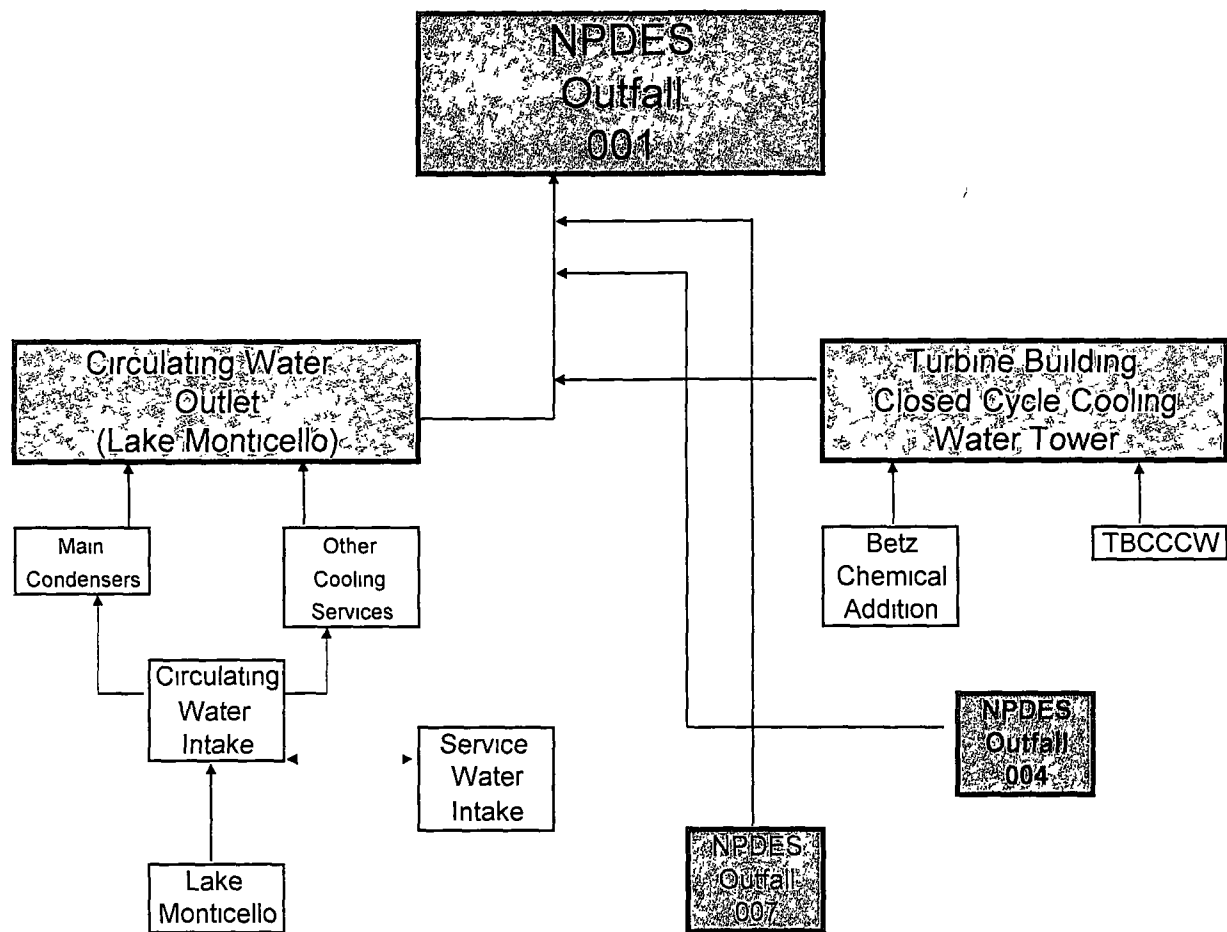


## OUTFALL 001

### CIRCULATING WATER

Outfall 001 is discharged into the Monticello Reservoir discharge Canal Zone. It is approximately 25 yards east/southeast of the access road into V.C. Summer Nuclear Station. The discharge is approximately 10 feet below the 425' full level elevation.

The Circulating Water System removes thermal energy from the main and auxiliary condensers and dissipates this energy to the Monticello Reservoir via the Circulating Water Discharge Canal.



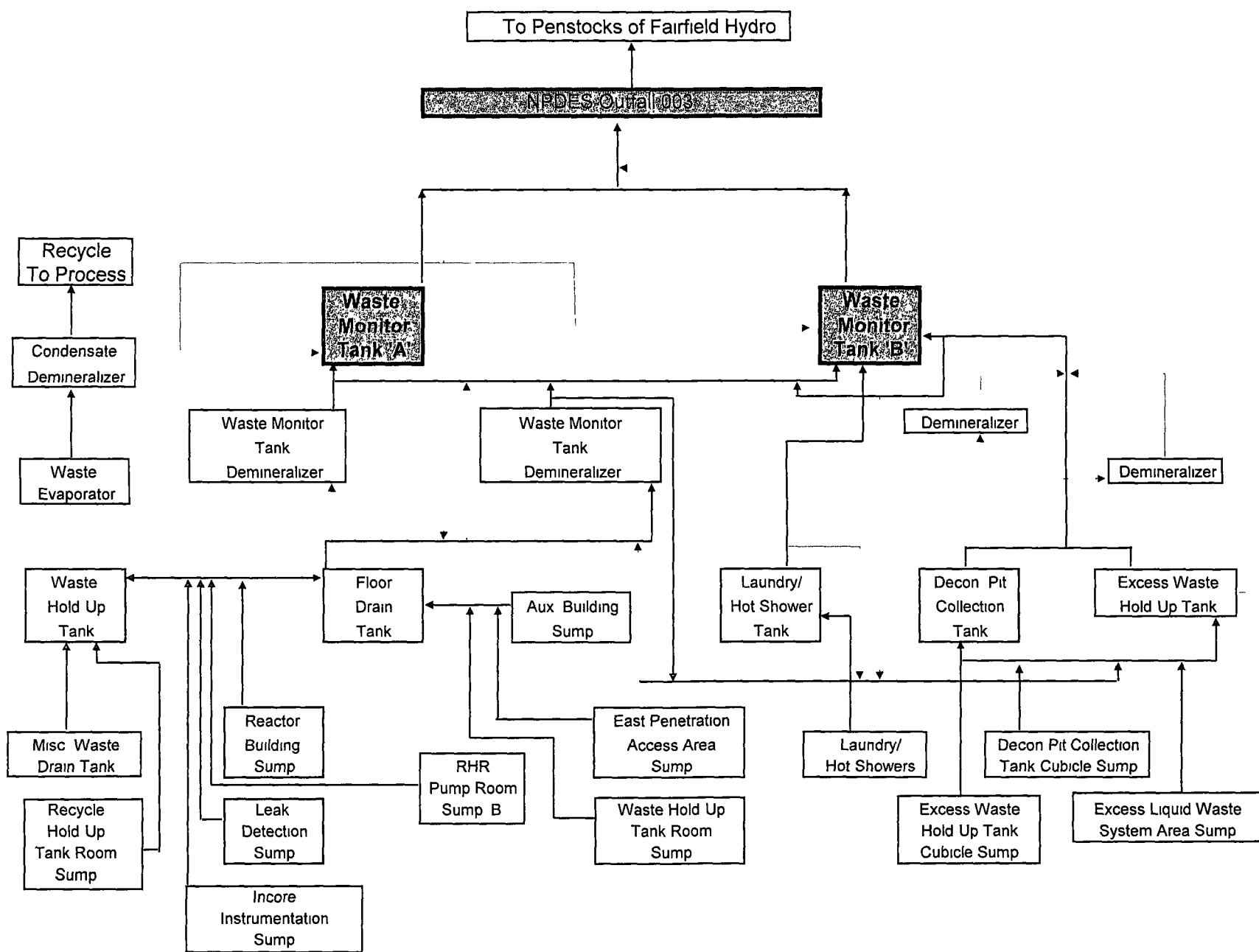
## OUTFALL 003

### WASTE MONITOR TANKS

Outfall 003 is discharged into the Penstocks of Fairfield Hydro at Broad River. This discharge point is located approximately one-half mile from the northwest corner of the Nuclear Plant.

Two waste monitor tanks are provided for monitoring discharges from potentially radioactive areas at VCSNS. The tanks act as a reservoir for storing wastewater, which is to be released from the Liquid Waste Processing System (LWPS) through the penstocks at the Fairfield Pumped Storage Facility. The LWPS is designed to receive, control, segregate, process, recycle and discharge wastewater that is potentially radioactive. Outfall 003 may also receive effluent from the Blowdown Monitor Tank.

Provisions are made to sample and analyze wastewater before it is discharged to ensure that quantities of radioactive releases to the environment are in accordance with 10CFR50, Appendix I, of the Nuclear Regulatory Commission (NRC) Regulations.





## OUTFALL 004

### STEAM GENERATOR BLOWDOWN

Outfall 004 may be discharged via Outfall 001 into the Monticello Reservoir. Outfall 004 is discharged into Outfall 001 in the southwest corner of the Turbine Building near elevation 400'. The water is then carried through Outfall 001 into the Monticello Reservoir Discharge Canal Zone.

During plant operation, the Steam Generator Blowdown System is in service to continuously purge the steam generators of impurities in order to maintain water chemistry. The Feedwater System supplies Feedwater to the steam generators from the Condensate System. Demineralized water provides makeup to the Condensate System, which in turn is provided with a polishing system consisting of filters and demineralizers. This system may be used to maintain the purity of the water entering the steam generators by removing chemical impurities and rust. The secondary water chemistry control program includes a comprehensive monitoring program, the purpose of which is to minimize overall system corrosion. Steam generator water chemistry is controlled through sampling, steam generator secondary side blowdown, and water treatment by chemical addition. VCSNS uses an all-volatile treatment for corrosion control of secondary side water.

Water entering the steam generator must be kept as pure as possible to prevent excessive corrosion of the steam generators. As a result, steam generator blowdown produces a minimum of contaminants.

In addition, the nuclear blowdown processing system is used to process cooled steam generator blowdown fluid and returns decontaminated water to the secondary side. Individually regulated blowdown from each steam generator is cooled and reduced in pressure prior to combination with other blowdown streams. The blowdown is then processed by the Nuclear Blowdown Processing System through a filter, mixed bed demineralizers in series, and a post filter from which it returns to the secondary cycle.

Although alternate effluent paths for steam generator blowdown exist, VCSNS has been reclaiming blowdown for the major portion of the operational cycle. Aside from releases during maintenance evolutions, in-house release permits have been held to a minimum for steam generator blowdown since May 18, 1988.

NPDES  
Outfall  
004

Steam  
Generator  
Blowdown

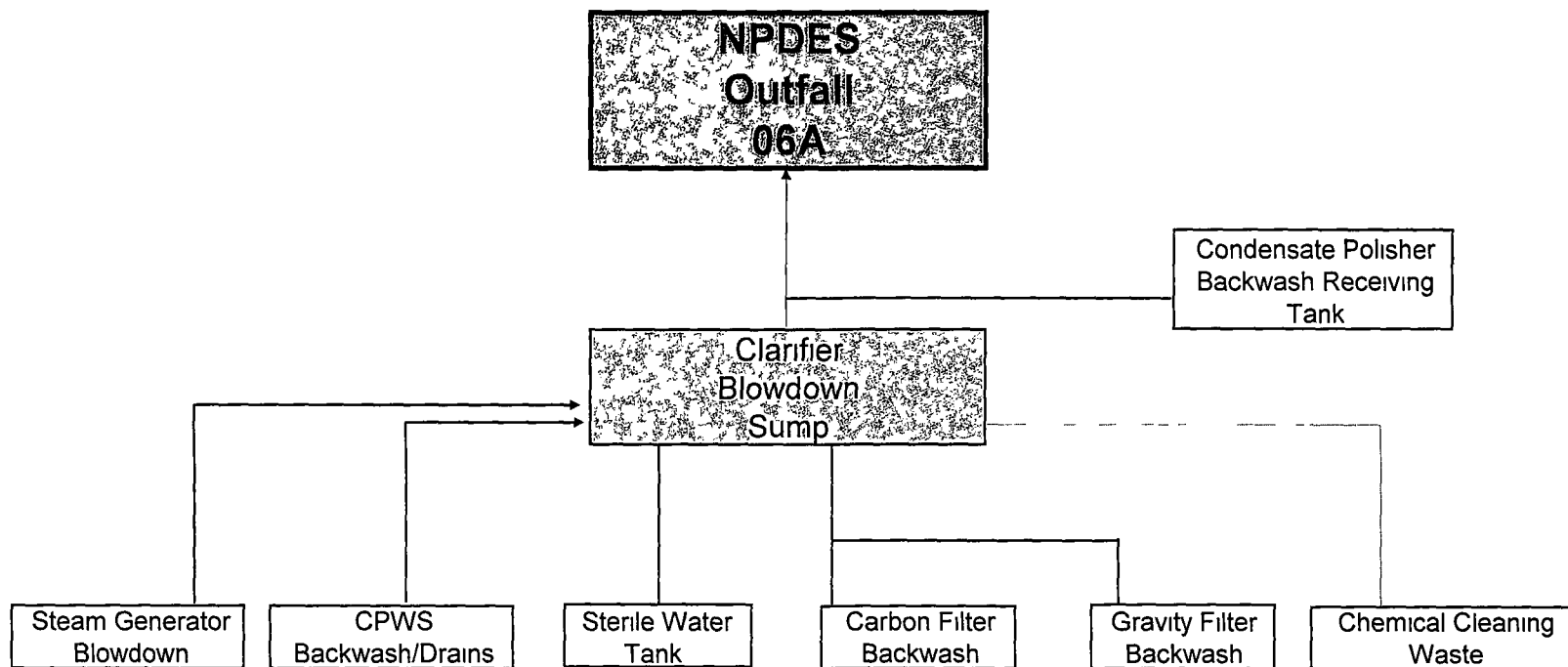


## OUTFALL 006A

### ALUM SLUDGE BASIN

Outfall 006A is discharged into the combined Outfall 014 and carried to the Monticello Reservoir Discharge Canal Zone. Outfall 006A is located in the field lagoon area on the west side of the access road into V C Summer Nuclear Station. This area is approximately 300 yards southeast of the Nuclear Plant and is located approximately 50 yards off Bradham Boulevard.

The Alum Sludge Basin is used to treat wastewater primarily from the raw water treatment area of VCSNS. Treatment consists of sedimentation for reduction of suspended solids content before the effluent combines with the effluents from Outfalls 005, 006B and 008 (forming Outfall 014) for release to Monticello Reservoir via the Circulating Water Discharge Canal.

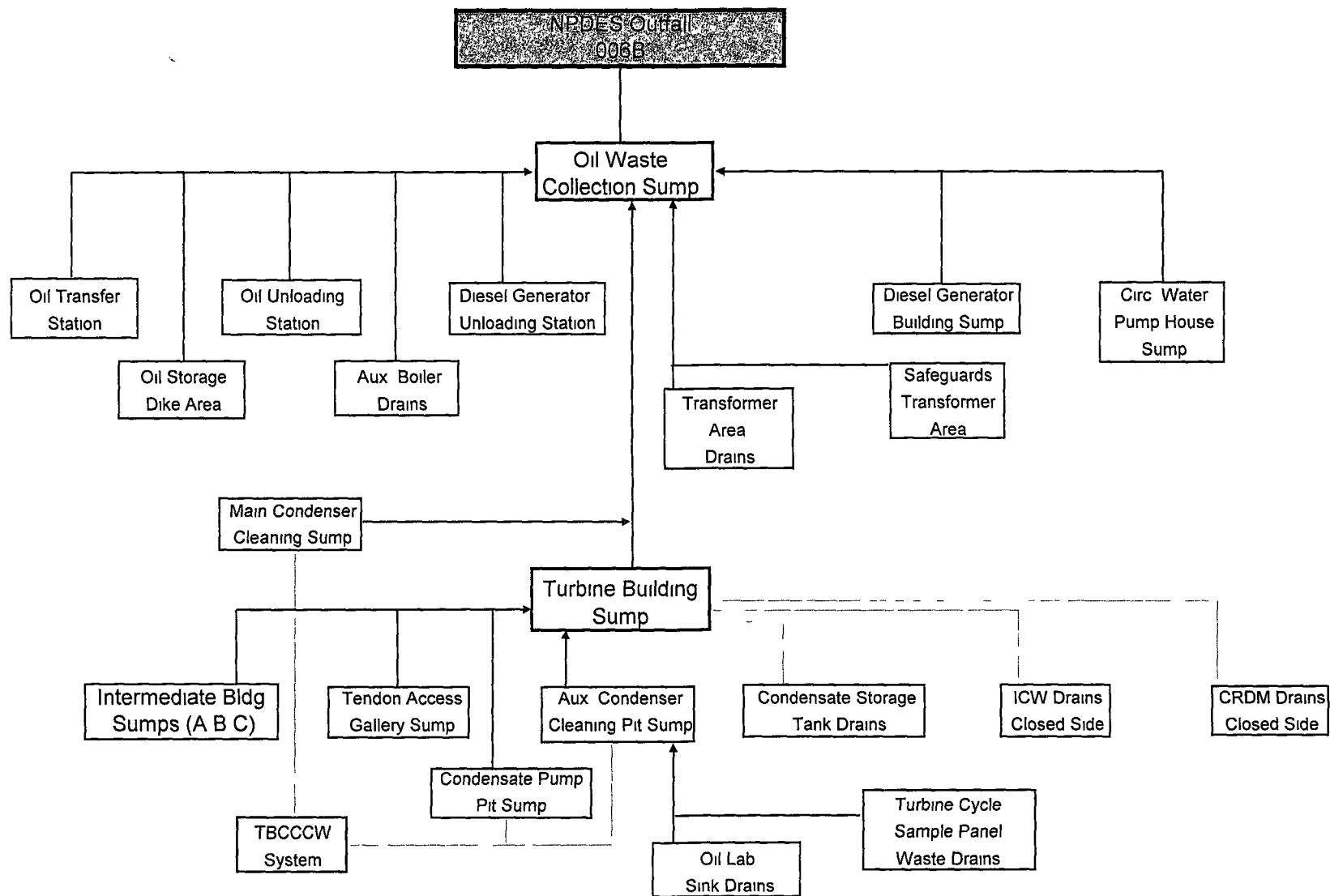


## OUTFALL 006B

### PLANT SURGE BASIN

Outfall 006B is discharged into the combined Outfall 014 and carried to the Monticello Reservoir Discharge Canal Zone. Outfall 006B is located in the field lagoon area on the west side of the access road into V C Summer Nuclear Station. This area is approximately 300 yards southeast of the Nuclear Plant and is located approximately 150 yards off Bradham Boulevard.

The Plant Surge Basin functions as a retention basin. Sources of wastewater to the Plant Surge Basin consist primarily of wastewater from various sumps, stormwater from transformer areas and stormwater from fuel oil storage and handling areas. Wastewater initially collects in a 6000-gallon common collection sump and is periodically pumped to the retention basin. An oil skimmer removes oil, which is collected in a holding tank. Sedimentation also occurs in the retention basin and reduces suspended solids content. Treated effluent gravity flows from the retention basin and combines with treated effluents from Outfalls 005, 006A and 008 (forming Outfall 014) prior to discharge to Monticello Reservoir via the Circulating Water Discharge Canal.

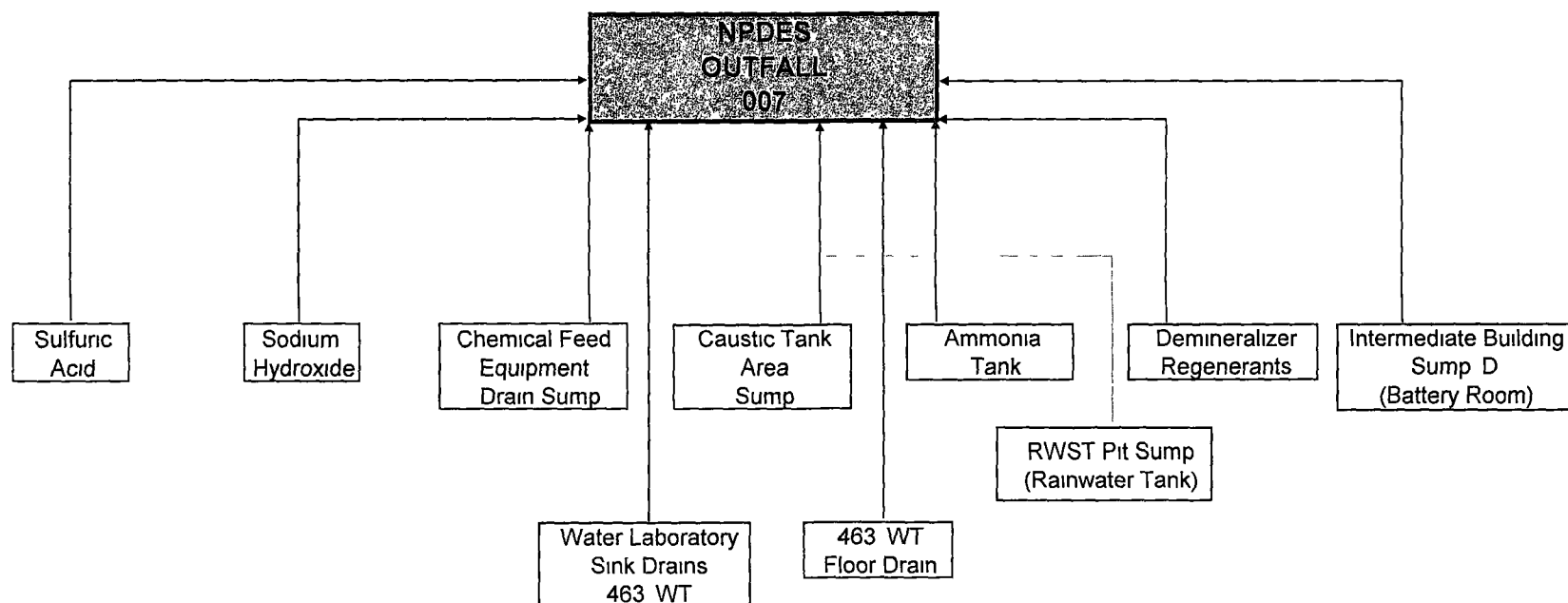


## OUTFALL 007

### NEUTRALIZATION BASIN

Outfall 007 is discharged into Outfall 001 and carried to the Monticello Reservoir Discharge Canal Zone. Outfall 007 is located on the east side of the Water Treatment Plant at V C Summer Nuclear Station.

The Neutralization Basin is a 100,000 gallon wastewater treatment tank. Sodium hydroxide or sulfuric acid is used to adjust pH to near neutral. Neutralized wastewater is discharged into the Circulating Water System discharge piping (Outfall 001). The pH of the neutralized wastewater is continuously monitored, and discharge is automatically terminated if the pH value exceeds specified limits.





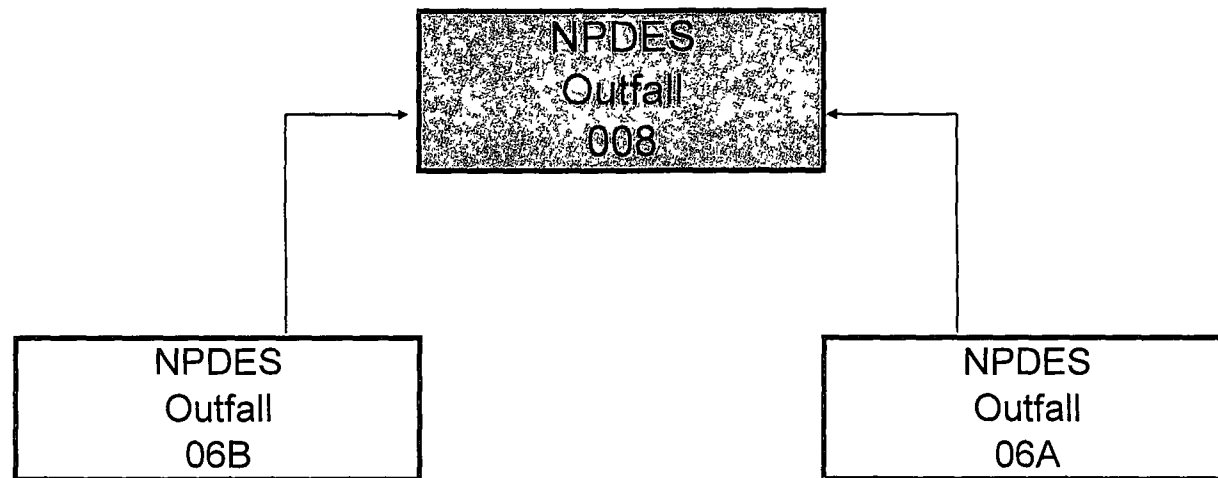
## OUTFALL 008

### PLANT STARTUP WASTE HOLDING BASIN

Outfall 008 is discharged into the combined Outfall 014 and carried to the Monticello Reservoir Discharge Canal Zone. Outfall 008 is located in the field lagoon area on the west side of the access road into V C Summer Nuclear Station. This area is approximately 300 yards southeast of the Nuclear Plant and is located approximately 75 yards off Bradham Boulevard.

The Plant Startup Waste Holding Basin is a sedimentation basin for retention of wastewater generated primarily by chemical cleaning of various equipment, piping, etc. Chemical cleaning evolutions occur on an infrequent basis and are implemented for purposes of removing rust, scale, debris and biomass.

Biomass removal is necessary to control such organisms as bacteria which cause microbiologically influenced corrosion, and Asiatic Clams which infect nonbiologically treated systems at VCSNS. The Plant Startup Waste Holding Basin is also used as an alternate alum sludge basin. Treatment consists of sedimentation for reduction of suspended solids content prior to the effluent being combined with the effluents from Outfalls 005, 006A and 006B (forming Outfall 014) for releases to Monticello Reservoir via the Circulating Water Discharge Canal.

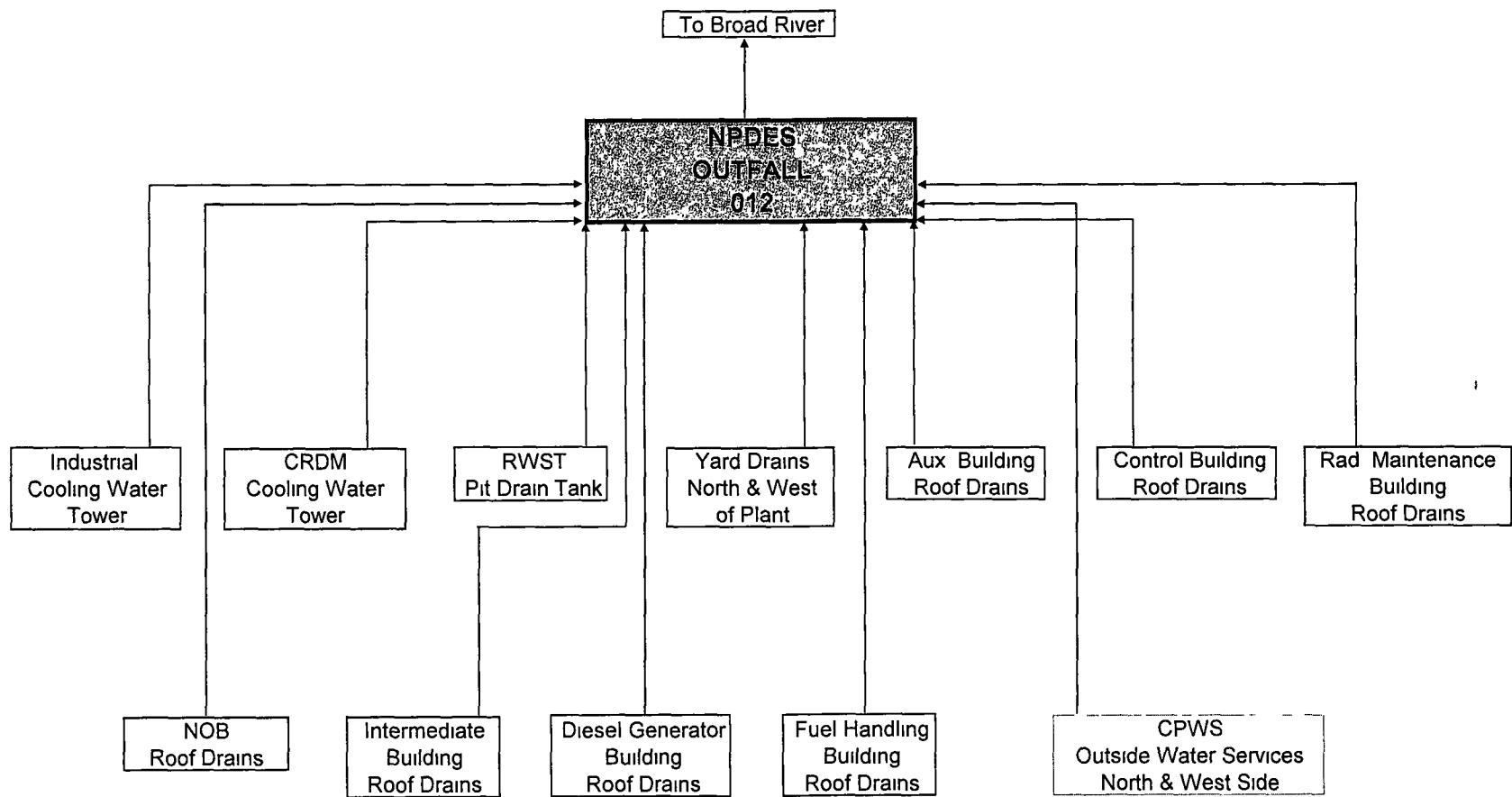


## OUTFALL 012

### NORTH YARD DRAIN SYSTEM

Outfall 012 is discharged into the Broad River. Outfall 012 is located on the west/southwest side of the Nuclear Plant, approximately 50 yards from the access road leading to the Craft Training Center.

This system primarily collects stormwater runoff from the north/northwest area of the plant site yard drains and roof drains. Included in the effluent from this system is the accumulated stormwater from the refueling water storage tank (RWST) pit drain tank. The RWST pit accumulates rainwater, which is radiologically evaluated prior to release from the RWST pit drain tank. Where radiological concerns are present, the RWST pit drain tank effluent is diverted to the liquid waste processing system. The stormwater runoff, combined with discharges from prior permitted outfalls 009A and 009B, is discharged to a wet weather ditch, which flows via an unnamed stream to the Broad River.

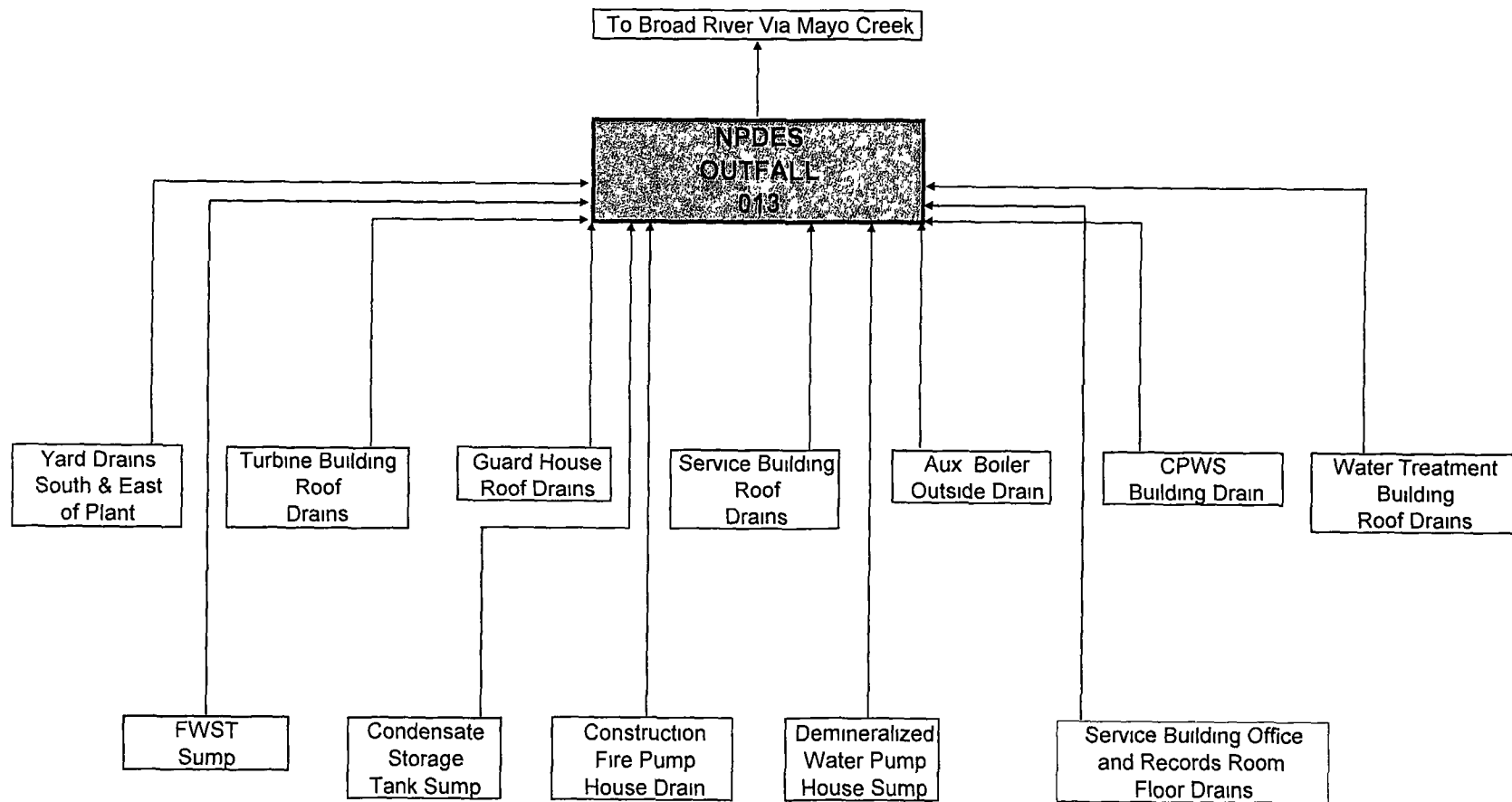


## OUTFALL 013

### SOUTHEAST YARD DRAIN SYSTEM

Outfall 013 is discharged into the Broad River. This outfall is located on the south side of Bradham Boulevard, and approximately 100 yards south/southwest of the Circulating Water Discharge Canal.

The Southeast Yard Drain System collects stormwater runoff from the east/southeast area of the plant site yard drains and roof drains. Included in the effluent from this system are the overflow and bleedoff from several water systems and associated tanks, including Filtered Water, Demineralized Water and Condensate System. This drain system discharges to the headwaters of Mayo Creek southeast of the plant.

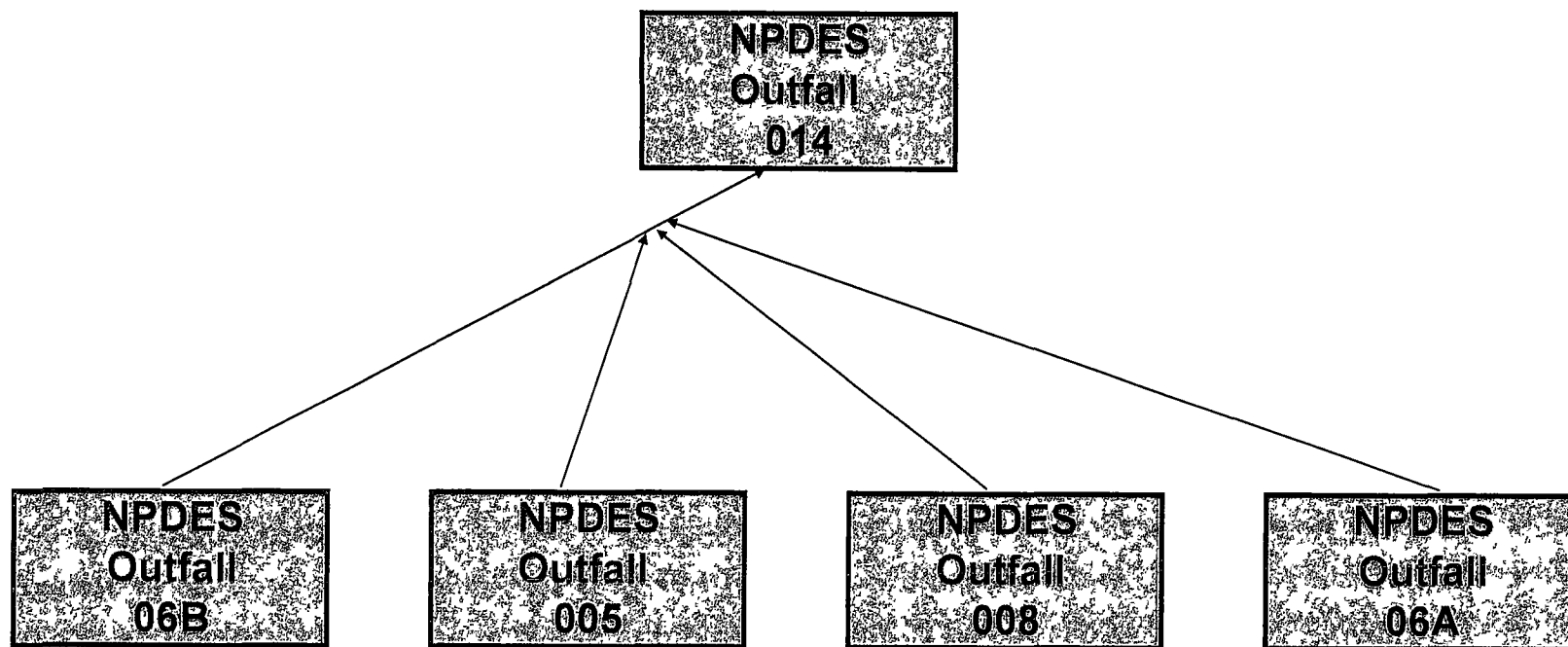


## OUTFALL 014

### COMBINED DISCHARGE PIPE EFFLUENT

Outfall 014 is discharged into the Monticello Reservoir Canal Zone. It is located approximately 30 yards east/southeast of the access road into V C Summer Nuclear Station. The discharge piping is approximately 1 foot above the 425' full level of Monticello Reservoir.

This outfall represents the combined internal outfalls 005, 006A, 006B and 008. It consists of sanitary sewerage and low volume wastes. It discharges into Monticello Reservoir via the Circulating Water Discharge Canal.





# SLUDGE DISPOSAL PROCEDURE



**BUREAU OF WATER**  
**SLUDGE DISPOSAL SUPPLEMENT FOR NPDES AND ND PERMIT APPLICATIONS**

Facility Name: V. C. Summer Nuclear Station

Permit Number: SC00 30856 (leave blank for a new facility)

or ND00 \_\_\_\_\_

Please check your proposed or current sludge disposal procedure:

**I. Existing Facilities:**

- ☐ Lagoon or other facility with no routine sludge disposal. Please attach a letter that addresses the approximate schedule for sludge removal and address the anticipated disposal method (note that the proposed sludge disposal method must be approved by the Department prior to initiation).
- ☐ Sludge disposal at another wastewater treatment facility. Attached is a recent letter of acceptance dated \_\_\_\_\_. This letter must include the NPDES or ND number of the treatment facility accepting the sludge for disposal. If no previous SCDHEC approval has been granted on the disposal method, then please include a detailed report on the existing sludge disposal method. See the attached requirements for Sludge Disposal Report A. If a previous SCDHEC approval has been granted, then include a recent analysis that shows the non-hazardous nature of the sludge or a signed statement that the sludge characteristics have not changes since the last analysis.
- ☐ Sludge disposal at a landfill. If the landfill is SWAIP (special waste) approved, an recent acceptance letter from the landfill is acceptable. If the landfill is not SWAIP approved, attached is SCDHEC Solid and Hazardous Waste approval dated \_\_\_\_\_, or other SCDHEC approval dated \_\_\_\_\_. If no previous approval has been granted on the disposal method, then please include a detailed report on the existing sludge disposal method. See the attached requirements for Sludge Disposal Report B.
- ☒ Sludge disposal by Beneficial Use of Sludge. Attached is SCDHEC approval letter or program approval dated 8/1/07. If no previous approval has been granted on the disposal method, then please include a detailed report on the existing sludge disposal method. See the attached requirements for Sludge Disposal Report C.

**II. Proposed Facilities:**

- ☐ Lagoon or other facility with no routine sludge disposal. Please attach a letter that addresses the approximate schedule for sludge removal and address the anticipated disposal method (note that the proposed sludge disposal method must be approved by the Department prior to initiation).
- ☐ Sludge disposal at another wastewater treatment facility. Please include a detailed report on the proposed sludge disposal method. See the attached requirements for Sludge Disposal Report A.
- ☐ Sludge disposal at a landfill. Please include a detailed report on the proposed sludge disposal method. See the attached requirements for Sludge Disposal Report B.
- ☐ Sludge disposal by Beneficial Use. Please include a detailed report on the proposed sludge disposal method. See the attached requirements for Sludge Disposal Report C.

**Send this form and the appropriate disposal report (if applicable) with your NPDES or ND permit application.**

**ALSO SEE ATTACHED INSTRUCTIONS**

### **Sludge Disposal Summary**

The approval to dispose of sludge was granted in the issuance of NPDES Permit No. SC0030856 with an effective date of August 1, 2007. Refer to NPDES Permit No. SC0030856 Part V.D.2.

# THERMAL MIXING ZONE EVALUATION

## 2010 WATER QUALITY MONITORING REPORT

## Mixing Zone for Thermal Discharge

V. C. Summer Nuclear Station (VCSNS) is requesting a mixing zone for the thermal discharge from VCSNS Unit 1. If the mixing zone is not granted, VCSNS will request the 316(a) variance.

A copy of the Thermal Mixing Zone Evaluation prepared by Geosyntec is enclosed for your review. This document presents background and technical information supporting formal requests to SCDHEC for the thermal mixing zone for the VCSNS cooling water effluent discharge to Monticello Reservoir. Based on the results of many years of monitoring and the modeling report, VCSNS is also requesting relief from monitoring the surface temperature at the Fairfield Pump Storage Facility (FPSF) intake structure. Based on years of monitoring and the modeling report, the thermal plume does not extend to the FPSF intake. In addition to this report, the 2010 Water Quality Monitoring for Monticello Reservoir is also attached for your review.



*Prepared for*

**SCANA – South Carolina Electric and Gas**  
100 SCANA Parkway  
Cayce, SC 29033

**THERMAL MIXING ZONE EVALUATION  
VIRGIL C. SUMMER NUCLEAR STATION  
NPDES PERMIT  
FAIRFIELD COUNTY, SOUTH CAROLINA**

*Prepared by*

**Geosyntec**   
consultants

engineers | scientists | innovators



engineers • scientists • innovators

Project Number GR4796

January 9, 2012

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## 1. INTRODUCTION

South Carolina Electric and Gas (SCE&G, a subsidiary of SCANA Corporation) is making an application to the South Carolina Department of Health and Environmental Control (DHEC) for a renewal of its National Pollutant Discharge Elimination System (NPDES) permit for Unit 1 of the Virgil C. Summer Nuclear Generating Station (V. C. Summer Station) located in Fairfield County near Jenkinsville, South Carolina.

This document presents background and technical information supporting formal requests to DHEC for the thermal mixing zone for the V. C. Summer Station cooling water effluent discharge to the Monticello Reservoir pursuant to Rule 61-68 (Water Classifications and Standards) Section C.10.

### **Facility Description**

Summer Station is a single-unit, 974-megawatt (MW) nuclear-fueled electric power generating facility that operates as a base-load facility. It uses a once-through cooling water system that withdraws cooling water from Monticello Reservoir via a single shoreline-positioned cooling water intake structure (CWIS) located at the south end of the reservoir. After the cooling water leaves the condensers, the heated water is conveyed to a “discharge bay” and then through a 1,000 foot (ft) discharge canal leading into Monticello Reservoir.

Monticello Reservoir is a 6,800-acre (ac) freshwater impoundment that was built in the Frees Creek valley in 1978 to serve both as the cooling water source for Summer Station and the upper pool for the Fairfield Pumped Storage Facility (FPSF). The Federal Energy Regulatory Commission (FERC) regulates water levels in Monticello Reservoir through the hydropower license for SCE&G’s Parr Shoals (Broad River) Hydroelectric Project (FERC License No. 1894), of which FPSF is a part. The FERC license for Parr Shoals establishes water surface elevation guidelines for Monticello Reservoir between 425.0 feet (ft) above mean sea level (msl) (high water level) and 420.5 ft msl (low water level). Reservoir levels may fluctuate daily within this 4.5-ft operating band as a result of FPSF operation.

The operation of the FPSF will vary depending on the season and system power needs. In summer, the facility generally pumps water from Parr Reservoir to Monticello Reservoir between the hours of 11:00 pm and 8:00 am and generates power by releasing



water between the hours of 10:00 am and 11:00 pm. In winter, FPSF generally pumps water daily from Parr Reservoir to Monticello Reservoir between 11:00 pm and 6:00 am and generates between the hours of 6:00 am and 1:00 pm. Pumping to Monticello Reservoir is normally done at maximum capacity during off-peak periods. The power output for FPSF varies from one generator up to the maximum output from eight generators, depending on demand. Consistent with its operation as a peaking facility, maximum output of FPSF may not be necessary on all days.

### **Permitting History**

The NPDES permitting history for the Summer Station discharge extends from the mid-1970s when the facility was first permitted. Operating as a once-through cooling water system, thermal addition to Monticello Reservoir is substantial with discharge flow rates up to 532,000 gallons per minute (768 million gallons per day). To comply with South Carolina Department of Health and Environmental Control (DHEC) water quality standards for temperature in lakes, SCE&G conducted studies to successfully support alternate thermal effluent limitations under Clean Water Act Section 316(a) per South Carolina Regulation 61-68 – Water Classifications and Standards: Section E.12.c.)<sup>1</sup>. The following numeric effluent limitations for temperature were established for Summer Station Outfall 001 in the initial permit:

- a daily maximum temperature of 113°F to be measured “in pipe” prior to discharge;
- a monthly average temperature of 90°F measured at the FPSF intake structure (considered the mixing zone boundary);
- a maximum thermal plume size of 6,700 acres; and

---

<sup>1</sup> The weekly average water temperature of all Freshwaters which are **lakes** shall not be increased more than 5°F (2.8°C) above natural conditions and shall not exceed 90°F (32.2°C) as a result of the discharge of heated liquids unless a different site-specific temperature standard as provided for in C.12. has been established, a mixing zone as provided in C.10. has been established, or a Section 316(a) determination under the Federal Clean Water Act has been completed (South Carolina Regulation 61-68 – Water Classifications and Standards: Section E.12.c.).



- a monthly average temperature rise ( $\Delta T$ ) within the plume of 3°F measured between the FPSF intake structure and a point at the northern end of the reservoir.

Based on several years of monitoring, DHEC ultimately eliminated the plume size and  $\Delta T$  limitations leaving in place the 113°F daily maximum limit and 90°F monthly average limit in subsequent permits.

Thermal discharges and repeated continuation of alternate thermal limits (variances) in NPDES permits that are based on historical 316(a) demonstration study data have come under increased scrutiny by the U.S. Environmental Protection Agency (USEPA) who oversees the DHEC NPDES program. Recently, DHEC and SCE&G have had discussions relative to renewal of the current NPDES permit for V. C. Summer Station concerning the level of information needed to support the continued discharge temperature limits for the facility. There have been no substantive changes<sup>2</sup> to V. C. Summer Station operations since issuance of the initial NPDES permit in the mid-1970s. As such, SCE&G believes that reevaluation of the thermal mixing zone characteristics and boundaries via updated hydrodynamic modeling (in complement to the earlier 316(a) demonstration study data) will provide the quantitative information needed by DHEC to support a decision maintaining the current temperature limits for Summer Station that is consistent with South Carolina Regulation 61-68, Section E.12.

### **Related Modeling Work**

The primary modeling study related to the thermal plume characteristics of the cooling water discharge for the V. C. Summer Station was carried out by NUS Corporation in 1985 [1] and updated in 1989 [2]. A mathematical model of the lake was created which accounted for discharge and atmospheric parameters and calculated the thermal plume based on assumed vertical temperature profiles. The conclusions of the study showed that the VC Summer Station would not violate any of the three quantitative temperature limits in the NPDES permit at the time, even under extreme meteorological conditions.

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<sup>2</sup> Licensed power output of the V.C. Summer Station Unit 1 has been increased, but due to some cooling loads being handled by a small cooling tower, the heat loading to the reservoir has not changed significantly. Additionally, the discharge canal was dredged (canal is now deeper than it was originally) to alleviate fish kills in the discharge bay area.



While certainly an advanced and comprehensive analysis at the time, the NUS study did not consider several important features of the thermal discharge. In particular, the Unit 1 cooling water discharges into a small basin (approximately 600 ft x 600 ft surface dimension), which is connected to the reservoir through a channel approximately 900 ft in length and 200 ft wide. The dynamics in the basin and channel are complex; recirculating flows in the basin, and an unusual return flow of cold water flowing along the bottom of the channel from the reservoir to the basin. These features could not have been reasonably accounted for and calculated by the NUS study, and neither can they be calculated with more modern tools such as CORMIX [3], since in both these cases underlying assumptions are made regarding the temperature profiles.

In order to more definitively characterize the V. C. Summer Station Unit 1 thermal discharge into the hydrodynamically and spatially complex mixing environment in the basin, channel and reservoir, a more robust modeling approach was needed. As such, three-dimensional Computational Fluid Dynamics (CFD) modeling effort was conducted.

CFD modeling is based on the Navier-Stokes equations for fluid motion, which are simply an expression of Newton's laws of motion with additional viscous stress terms required to calculate fluid flow [4]. The equations express the laws of conservation of mass, momentum and energy and are hence a "fundamental" set of equations (i.e., no assumptions are made in forming the basic equation set).

CFD modeling has been used successfully for over 40 years in a variety of industrial and environmental applications. The Tennessee Valley Authority (TVA) used CFD modeling to evaluate the thermal discharge from its Browns Ferry Nuclear Power Plant to Wheeler Reservoir in north Alabama [5]. The CFD model allowed TVA to determine thermal plume mixing and temperature rise patterns as well as other hydrodynamic features of the discharge. Notably, TVA found close agreement between CFD model predicted water temperatures and direct temperature measurements at the operating diffusers.

More recently, Geosyntec Consultants and MMI Engineering employed CFD to model the complex thermal plume characteristics of the proposed William States Lee III Nuclear Generating Station, as part of the NPDES permit application for the site submitted by Duke Energy to DHEC. Similar to the current study, the thermal plume



was affected by operations in the receiving water body that significantly affected the surface elevation.

Other examples of CFD environmental applications include the U.S. Department of Energy's Pacific Northwest National Laboratory use of CFD in the hydrodynamic evaluation of the North Fork Dam forebay on the Clackamas River in Oregon and to model the three-dimensional velocity field below Bonneville Dam to enhance fish passage [6]. CFD has also been used to investigate the increased discharge associated with the re-powering of an existing power plant [7].

## **2. GENERATION OF THE COMPUTATIONAL MODEL**

Geosyntec/MMI Engineering uses a variety of classical and computational analysis techniques to assess the performance of fluid systems and processes. For detailed CFD analysis, calculations are made with the general purpose, commercial CFD code ANSYS-CFX Version 12 [8]. This is the CFD model code selected for the current analysis. Full details of the computational model are given in Appendix A.

The extent (geometry) of the Monticello Reservoir and discharge bay and canal environment in the CFD models included:

- the Unit 1 discharge bay and canal;
- the Fairfield Pumped Storage Facility intakes;
- the backwater areas in the locality of the canal; and,
- a section of the Monticello Reservoir extended approximately 1.6 miles north of the discharge structure.

Total surface area of the modeled domain was approximately 1800 acres, or approximately 25% of the total surface area of the reservoir.

Bathymetry data in the discharge bay and canal, and in part of the Monticello Reservoir, was collected by Geosyntec in the form of point-depth measurements in a series of transects. These point data were interpolated to form part of the reservoir bed in the CFD models. For the areas of the model that were not covered by the bathymetry data, a contour map was provided to MMI/Geosyntec (a section of this map is shown in



Figure 3) and was digitized by MMI/Geosyntec to create approximately 10,000 additional data points (Figure 4) that were combined with the collected bathymetry data to form the entire model (see Figure 5 and Figure 6). A more detailed view of the model in the vicinity of the discharge, showing the bay and canal, is shown on Figure 7 and Figure 8.

Detailed drawings of the discharge structure were not available; however the shape of the structure and its dimensions and exact location can be calculated from aerial photographs. The discharge pipe diameter is 144" [9], and in the model this was represented as a square cross-section (rather than circular) of the same area as the circular pipe. This ensures the correct mass, energy and momentum input into the model and the highly turbulent flows near the discharge would quickly smooth out small differences in the shape of the discharge pipe.

Views of the computational mesh, which contained approximately 500,000 cells with 20 cells in the depth direction, are shown on Figure 9 and Figure 10.

### 3. SCENARIOS

The following modeling scenarios were run to capture the expected worst case results (thermally and spatially) for the Summer Station thermal discharge:

- **Scenario 1** – Thermal discharge under peak load and discharge flow with Monticello Reservoir elevation under high water-slack conditions (no flow through FPSF).
- **Scenario 2** – Thermal discharge under peak load and discharge flow with Monticello Reservoir elevation under low water-slack conditions (no flow through FPSF).
- **Scenario 3** – Thermal discharge under peak load and discharge flow with Monticello Reservoir elevation under low water-rising conditions (FPSF pump-back); and
- **Scenario 4** – Thermal discharge under peak load and discharge flow with Monticello Reservoir elevation under high water-falling conditions (FPSF generation).

Each scenario was modeled under critical conditions of summer when ambient reservoir and discharge temperatures are expected to be greatest and have the most potential for acute effects to aquatic life. This will allow evaluation of thermal plume mixing characteristics and spatial dimensions in the context of the DHEC 90°F temperature criterion. Based on data transmitted to MMI/Geosyntec [10], the ambient reservoir temperature was set to 86.4°F as this was the highest monthly-average temperature recorded at the Unit 1 intakes in 2010. The discharge temperature was set to 113.0°F which was measured during August 2011, and is approximately 1°F higher than the recorded highest monthly-average discharge temperature in 2010.

Additionally, each scenario was also modeled under winter conditions when differential between the plume temperature and ambient temperature (i.e.,  $\Delta T$ ) are expected to be greatest. This will allow evaluation of thermal plume mixing characteristics and spatial dimensions in the context of the DHEC 5°F  $\Delta T$  temperature criterion. Based on data transmitted to MMI/Geosyntec [10], the highest monthly-averaged  $\Delta T$  for 2010 occurred in November, where the monthly-average reservoir temperature was recorded at 66.6°F and the monthly-average discharge temperature was 98.7°F, resulting in a  $\Delta T$  of 32.1°F. These temperature values were used to represent winter conditions.

In all cases, the discharge flow rate was set to 532,000 gpm which is the flow rate through the Unit 1 intake with all three intake pumps fully operational. Based on data transmitted to MMI/Geosyntec [11], the flow rate for FPSF pump-back was set to 41,800 cfs and the flow rate for FPSF generation was set to 50,400 cfs.

#### 4. VALIDATION OF THE COMPUTATIONAL MODEL

Geosyntec collected temperature and velocity profiles during a data survey conducted on the Monticello Reservoir in August 2011. The most useful “snapshot” of the temperature of the thermal plume was taken at around 2pm on August 3<sup>rd</sup> 2011 in the form of five temperature profiles extending to a maximum depth of 25ft. These profiles are shown on Figure 11 (note that the temperature scale is in degrees Celsius). At the time of the measurements, the discharge temperature was 44.1°C (111.4 °F) and this is shown for reference on Figure 11 by the broken purple line on the right. The most striking feature of the measurements is the difference between the discharge temperature and the measured temperature in the discharge bay (i.e. almost immediately downstream of the discharge). This profile is shown in blue in the figure. If the water in the discharge bay were from the discharge alone, then a temperature near to 44.1°C



would be expected as the only losses would be minor. However, the measurements show temperatures around 40°C in the discharge bay. An indication of the explanation for this can be deduced from the temperature profile taken at the confluence of the discharge bay and canal (shown in red). For depths below 15 ft, the temperature reduces rapidly to less than 34°C. The profile taken at the mouth of the discharge canal (green) has a similar dramatic reduction in temperature below 10 ft depth, to just above 30°C near the bottom, which is approximately the same as the recorded background temperature (light blue). It appears from the data that it is likely that these temperature profiles comprise discharge (hot) water in the upper layer and ambient (cold) water in the lower layer, which, since this pattern is repeated at in the discharge bay (red line) suggests that cold water is flowing from the reservoir into the bay along the bottom of the discharge canal, and hot water is flowing in the opposite direction near the surface. Indeed, this phenomenon of warm water flowing over cool water in the discharge canal was explained to MMI/Geosyntec staff by SCE&G staff prior to the measurements being taken. The field measurements confirmed this.

A somewhat less expected feature of the temperature profiles is the apparent inversion in the upper 5 ft of the profiles, where the temperature reduces significantly, suggesting a cooler, more dense layer near the surface on top of a warmer and less dense layer below (in opposition to the natural tendency of buoyancy). The only physical explanation for this reduction in temperature is a very high rate of heat loss at the surface, much higher than one would expect by classical heat loss calculations alone. This may be linked to waves generated by the discharge or the wind, or churning aeration of the very upper layer.

To investigate the accuracy of the computational model, a simulation was run to approximate the thermal plume as closely as possible at the time the measurements were taken. The discharge temperature was set to 44.1°C (111.4 °F) and the flow rate was set to 532,000 gpm. The surface elevation of the reservoir was set to 423.5 ft msl which was calculated from level-loggers installed by Geosyntec. In addition, a surface shear stress was applied that was equivalent to a 10 ft/s north-easterly wind which was recorded on the day.

Figure 12 shows a contour plot of temperature on the surface of the reservoir resulting from the simulation. The blue coloration indicates the ambient temperature of the reservoir (set as 32.0°C) while the red coloration indicates a temperature equal to the discharge temperature. The plume can be seen to gradually reduce in temperature away

from the discharge bay and canal. Interestingly, the oranges and yellows in the discharge bay as predicted in the CFD model indicate much lower temperatures than in the discharge pipe. To investigate this further, two contour plots were produced of temperature on the surface and at 18 ft depth – these are shown on Figure 13 (a) and (b) respectively. Figure 13 (a) shows a close view of the contour plot in Figure 12, and surface temperatures of approximately 41.0°C can be observed. However, Figure 13 (b) which is the temperature at 18 ft depth, shows much cooler (blue) temperatures near the bottom of the discharge canal, as was observed in the field measurements. A clear visualization of this phenomenon can be seen on Figure 14, where velocity vectors are shown on a vertical cut-plane in the center of the canal, and are colored by temperature rather than velocity. There is a clear flow of cold water from the reservoir to the discharge bay in the lower layers, and a flow of hot water in the reverse direction in the upper layers.

Qualitatively the model thus agrees with the anticipated flows, despite these flows being unusual. A quantitative comparison is shown on Figure 15 where the lines indicate results from the CFD model and the circles indicate measured data. The colors of the lines and circles match where the profiles were taken at the same locations. The CFD results in the discharge bay (blue line) shows that the temperature has decreased in the discharge bay by approximately the correct amount. This is due to the counter-flow of cold water into the bay from the reservoir, which is shown by the CFD model results at the confluence of the discharge bay and canal (red line). The sharp decrease in temperature mirrors the measured temperature gradient well. The major differences between the model and measured temperature profiles exist within the upper layer, where the inversion is not predicted by the CFD model. This is not unexpected since it is difficult to account for the inversion recorded by the data. However, it is important to note that the differences between the model and the data result in a higher surface temperature being predicted by the CFD model, showing that the model results will in general be conservative. At the mouth of the discharge canal (green line) the surface temperature is again over-predicted, but the sharp temperature gradient seen below 5 ft depth is captured, albeit at a slightly shallower depth in the model than was measured. Importantly, the model and data match well in the region halfway between the canal and exclusion buoys (orange), as the edges of the thermal plume are expected near this region. The last profile comparison (light blue line) is simply the background profile, which was set as constant in the CFD model but showed slight variation with depth in the measured data, probably due to naturally formed thermoclines rather than the



thermal plume itself given the distance between the measurement and the discharge (approximately 2 miles).

The validation effort therefore shows that the CFD model qualitatively predicts the correct behavior, particularly with respect to the known unusual flows in the discharge canal. The agreement between the model and measured data is generally good, with the greatest discrepancies near the surface of the reservoir. Where these discrepancies occur, the CFD model over-predicts the measured data, so the model results are conservative with respect to surface temperature and therefore the size and magnitude of the thermal plumes.

## **5. MODEL RESULTS – T = 90°F PLUME**

The four scenarios listed in §3 were run under summer conditions to evaluate the size of the 90°F thermal plume, as these conditions represent the worst-case scenarios for this plume. In all scenarios the discharge temperature was set to 113.0°F and the ambient reservoir temperature was 86.4°F. The scenarios for summer conditions are referred to as 1S, 2S, 3S and 4S in the text and figure captions, and the input parameters and results are summarized in §7 for reference.

The surface temperature for scenario 1S is shown on Figure 16. In this scenario, the reservoir surface elevation is high (425.0 ft msl) and the FPSF flow rate is zero (slack conditions). This figure provides a full view of the thermal plume in plan view, although it must be remembered that the analysis is three-dimensional so variations in temperature in the depth direction are captured. As anticipated, the hot plume spreads and cools as it mixes with the ambient water downstream of the discharge canal (the red areas in the figure represent temperatures about 112.0°F and the blue indicates less than 87.0°F). The 90°F plume is difficult to distinguish from the contour plot, so it is shown more clearly on Figure 17 where the purple area shows the 90.0°F. Note that the area shown on this figure does not necessarily extend vertically down to the bottom of the reservoir, as the temperature gradients highlighted in the validation study will also exist here. The dimensions of the thermal plume account for these variations as the computational model is three-dimensional. The volume of the 90.0°F plume for scenario 1S is 1,418 acre-ft and the surface area is 128 acres. The maximum length of the plume, which is taken from the end of the discharge pipe to the point in the plume furthest away from the pipe, is 4,332 ft, while the width of the plume (the maximum width in approximately an east-west direction) is 3,312 ft. Note that although the



maximum depth of the plume is 40 ft, the average depth of the plume is only 6.4 ft, indicating that the majority of the plume is relatively shallow.

Scenario 2S is the same simulation as scenario 1S but at a low surface elevation (420.5 ft). As the volume of the ambient water is reduced in the reservoir, but the flow rate from the discharge remains the same, it might be expected that the plume would be slightly larger in volume than the previous scenario. This is indeed the case – the volume of the 90°F plume is 1,627 acre-ft and the surface area is 150 acres. The temperature contours and 90°F plume for this case are shown on Figure 19.

When the FPSF is pumping under low surface elevation, approximately 41,800 cfs is injected into the reservoir at the ambient reservoir temperature. This is the situation modeled in scenario 3S. The velocity vectors on the surface of the reservoir are shown on Figure 20 where the scale is from zero velocity (blue) to 3 ft/s (red). Although the jet from the FPSF is set almost directly from west to east in the model, the proximity and angle of the coast just to the south of the FPSF causes the jet to turn south, resulting in a large recirculation region bounded by the jetty and the island. Although the change to the flows in the western region of the lake are significantly changed, the raised jetty effectively shields the thermal plume, so that neither the temperature contours (Figure 21) or the 90°F plume (Figure 22) are changed from slack conditions (compare to scenario 2S). Indeed, the 90°F plume are very similar to those in scenario 2S: the plume volume is 1,626 acre-feet, the surface area is 150 acres and the maximum length and width are 4,699 ft and 3,830 ft respectively.

The final scenario under summer conditions is 4S, where the FPSF is generating, removing 50,400 cfs of flow from the reservoir. This generates a velocity field pointing towards the FPSF intakes, as shown by the velocity vectors on Figure 23 (the scale in this figure is from zero (blue) to 1 ft/s (red)). Note that the influence of the FPSF is lesser when the flow is being withdrawn from the reservoir rather than injected, since the flow is withdrawn from all angles rather than the highly directional jet seen in Figure 20. The withdrawal of fluid from the reservoir does have the effect of “pulling” the plume and results in a stretched but shallower thermal plume – the maximum length and width of the plume are 4,775 ft and 3,705 ft respectively, but the average depth has reduced to 6.1 ft. Overall the 90°F plume is largest in this flow regime, with a volume of 1,790 acre-ft and a surface area of 163 acres. The reason why the generating rather than pumping regime increases the plume size is twofold: first, the “pulling” of the fluid is less turbulent and does not cause additional mixing; second, the flow does not sharply

turn, as was shown by the vectors near the island for the previous scenario. The surface temperature contours and 90°F plume for this case are shown on Figure 24 and Figure 25 respectively.

A summary of these results is given by the table in §7.

## 6. MODEL RESULTS – $\Delta T = 5^\circ\text{F}$ PLUME

The worst case for the  $\Delta T = 5^\circ\text{F}$  thermal plume is under winter conditions where the temperature difference between the background and discharge is greatest. As explained in §3, this occurs in November where the monthly-average ambient reservoir temperature is 66.6°F and the discharge temperature is 98.7°F, a  $\Delta T$  of 32.1°F. These temperatures were set for all four winter scenarios, and are referred to as 1W, 2W, 3W and 4W in the text and figure captions, and the input parameters and results are summarized in §8 for reference.

The surface temperature for scenario 1W (high surface elevation, slack conditions) is shown on Figure 26. Similar to the figures for the summer conditions, the blue coloration indicates ambient temperatures and red indicates temperatures similar to the plume; however in winter the ambient temperature is now 66.6°F and the plume temperatures is 98.7°F. In this color scale the thermal plume appears to be similar in shape and size to the summer plumes, but it is the  $\Delta T = 5^\circ\text{F}$  rather than the 90°F plume that is of interest here. This is shown for scenario 1W by the green area in Figure 27. This plume is visibly smaller than the 90°F plumes in the previous section. The volume of the  $\Delta T = 5^\circ\text{F}$  for this scenario is 799 acre-feet and the surface area is 77 acres. The maximum length and width are 3,391 ft and 2,763 ft respectively, while the average depth is 6.5 ft.

The same simulation but for low surface elevation of 420.5 ft msl was run as scenario 2W. For the summer simulations, the reduced surface elevation resulted in a larger thermal plume, and this is also the case for the winter conditions, as the volume has increased to 1,005 acre-ft and the surface area has increased to 107 acres. Similarly, the maximum length and width have increased to 4,129 ft and 3,190 ft respectively, but the plume on average is shallower with an average depth of 5.5 ft. The temperature contours and plume can be seen on Figure 28 and Figure 29.



A large recirculation zone was observed in the summer simulation with the FPSF pumping, and this is also seen under winter conditions in Figure 30, which shows velocity vectors (blue is zero, red is 3 ft/s) for scenario 3W. The vectors are very similar to those for scenario 3S, which is expected as the FPSF pumping flow rate is the same in both cases. However, unlike the summer scenario where an almost identical plume resulted with the FPSF pumping, in this case the plume is slightly bigger. This is not noticeable on the temperature contours (Figure 31) or the plume visualization (Figure 32) but the statistics show a marginal increase in plume size, to 1,148 acre-ft volume and 120 acres surface area. The maximum length and width has also increased to 4,219 ft and 3,325 ft respectively, but the average depth remains the same as scenario 2W at 5.5 ft.

Scenario 4W is the final scenario under winter conditions, simulating FPSF generating flow (50,400 cfs removed from the reservoir). The velocity vectors for this scenario are shown on Figure 33, which show the effect of the flow being removed from the reservoir. Similar to the results for summer conditions, the generating condition for the FPSF results in an extended but shallower plume; the surface area is 110 acres and the average depth is 5.8 ft. The plume dimensions are 3,183 ft for maximum width and 3,901 ft for maximum length, and result in an increase in volume over scenario 1W to 1,043 acre-feet.

## 7. RESULTS SUMMARY – T = 90°F PLUME

	Scenario 1S	Scenario 2S	Scenario 3S	Scenario 4S
Description	<i>Summer, high water, slack</i>	<i>Summer, low water, slack</i>	<i>Summer, low water, pumping</i>	<i>Summer, high water, generating</i>
<b>Reservoir Surface Elevation</b>	425.0 ft msl	420.5 ft msl	420.5 ft msl	425.0 ft msl
<b>Reservoir Temperature</b>	86.4°F	86.4°F	86.4°F	86.4°F
<b>Discharge Flow</b>	532,000 gpm	532,000 gpm	532,000 gpm	532,000 gpm
<b>Discharge Temperature</b>	113.0°F	113.0°F	113.0°F	113.0°F
<b>FPSF Operation</b>	0 cfs	0 cfs	+ 41,800 cfs	- 50,400 cfs
<b>Dimensions of the T = 90°F Thermal Plume</b>				
- Volume	1,418 acre-ft	1,627 acre-ft	1,626 acre-ft	1,790 acre-ft
- Surface area	128 acre	150 acre	150 acre	163 acre
- Average Depth/Thickness	6.4 ft	6.0 ft	5.9 ft	6.1 ft
- Maximum Depth/Thickness	40 ft	36 ft	36 ft	40 ft
- Maximum Width	3,312 ft	3,840 ft	3,830 ft	3,705 ft
- Maximum Length <sup>3</sup>	4,332 ft	4,699 ft	4,699 ft	4,775 ft

<sup>3</sup> Calculated from the end of the discharge pipe.





## 8. RESULTS SUMMARY – $\Delta T = 5^{\circ}\text{F}$ PLUME

	Scenario 1W	Scenario 2W	Scenario 3W	Scenario 4W
Description	<i>Winter, high water, slack</i>	<i>Winter, low water, slack</i>	<i>Winter, low water, pumping</i>	<i>Winter, high water, generating</i>
Reservoir Surface Elevation	425.0 ft msl	420.5 ft msl	420.5 ft msl	425.0 ft msl
Reservoir Temperature	66.6°F	66.6°F	66.6°F	66.6°F
Discharge Flow	532,000 gpm	532,000 gpm	532,000 gpm	532,000 gpm
Discharge Temperature	98.7°F	98.7°F	98.7°F	98.7°F
FPSF Operation	0 cfs	0 cfs	+ 41,800 cfs	- 50,400 cfs
Dimensions of the $\Delta T = 5^{\circ}\text{F}$ Thermal Plume				
- Volume	799 acre-ft	1,005 acre-ft	1,148 acre-ft	1,043 acre-ft
- Surface area	77 acre	107 acre	120 acre	110 acre
- Average Depth/Thickness	6.5 ft	5.5 ft	5.5 ft	5.8 ft
- Maximum Depth/Thickness	40 ft	36 ft	36 ft	40 ft
- Maximum Width	2,763 ft	3,190 ft	3,325 ft	3,183 ft
- Maximum Length <sup>4</sup>	3,391 ft	4,129 ft	4,219 ft	3,901 ft

<sup>4</sup> Calculated from the end of the discharge pipe.





## 9. RELEVANCE TO THE THERMAL MIXING ZONE RENEWAL

The results of the thermal modeling relative to the thermal mixing zone are as follows.

### For the $T = 90^{\circ}\text{F}$ plume:

- The maximum plume dimensions occur in summer, when the reservoir is at high surface elevation (425.0 ft msl) and the FPSF is generating.
- The maximum volume is 1,790 acre-ft.
- The maximum surface area is 163 acres.
- The maximum length is 4,775 ft.
- The maximum width is 3,705 ft.

### For the $\Delta T = 5^{\circ}\text{F}$ plume:

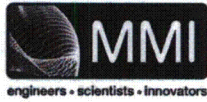
- The maximum plume dimensions occur in winter, when the reservoir is at low surface elevation (420.5 ft msl) and the FPSF is pumping.
- The maximum volume is 1,148 acre-ft.
- The maximum surface area is 120 acres.
- The maximum length is 4,219 ft.
- The maximum width is 3,325 ft.

The above results indicate that the  $T = 90^{\circ}\text{F}$  plume has a larger impact than the  $\Delta T = 5^{\circ}\text{F}$  plume.



## 10. REFERENCES

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- [6] *Computational Fluid Dynamics Modeling of the North Fork Dam Forebay, Clackamas River, Oregon and Bonneville Tailrace Project: Three-Dimensional CFD Models and Flow Measurements*. Pacific Northwest National Laboratory, Richland, WA.
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<http://www.ansys.com/default.asp>.
- [9] *Piping Yard Plan – Non Nuclear*, SCE&G Drawing E-303-202.
- [10] *Email correspondence*, from Summer, S. (SCE&G) to Heynes, O. (MMI) on 11/28/11 at 12:15 PM.
- [11] *Email correspondence*, from Summer, S. (SCE&G) to Heynes, O. (MMI) on 11/28/11 at 12:07 PM.

## 11. FIGURES

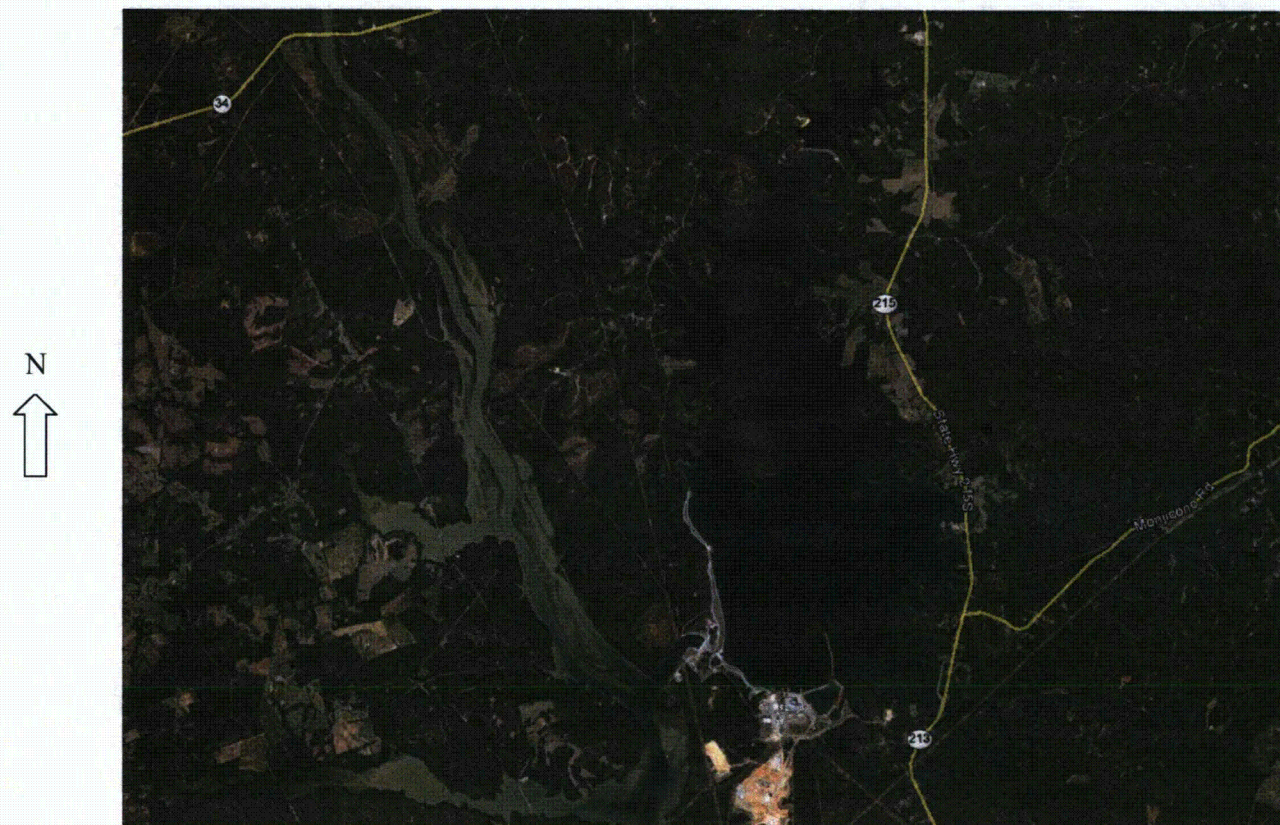


Figure 1 – Aerial photograph of the Monticello Reservoir and V. C. Summer Station





Figure 2 – Close aerial photograph of the Monticello Reservoir and V. C. Summer Station

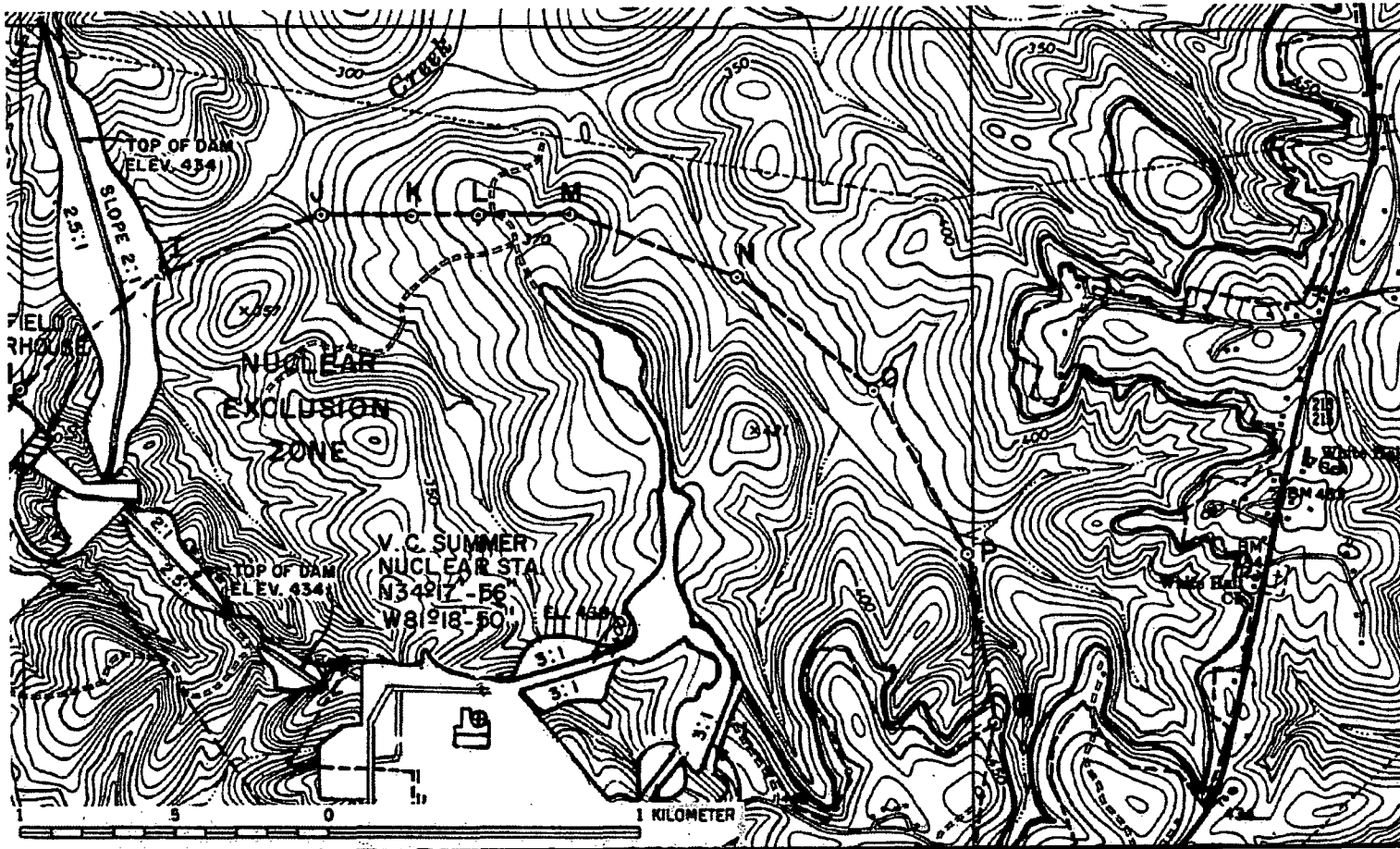


Figure 3 – Contour map of the Monticello Reservoir in the vicinity of the Unit 1 thermal discharge.



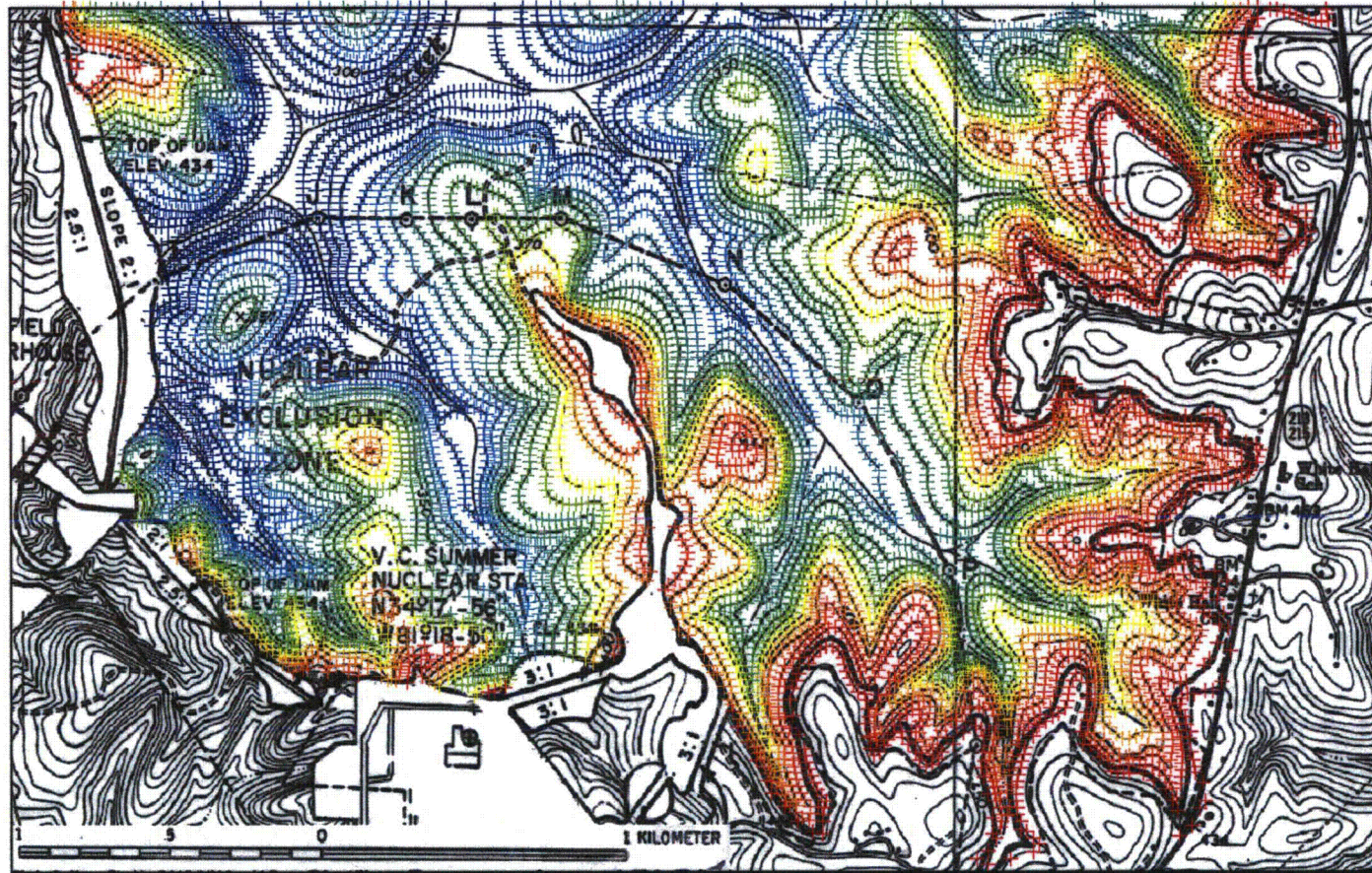


Figure 4 – Digitized points from the contour map, colored by elevation (red is 430 ft msl, blue is 270 ft msl).



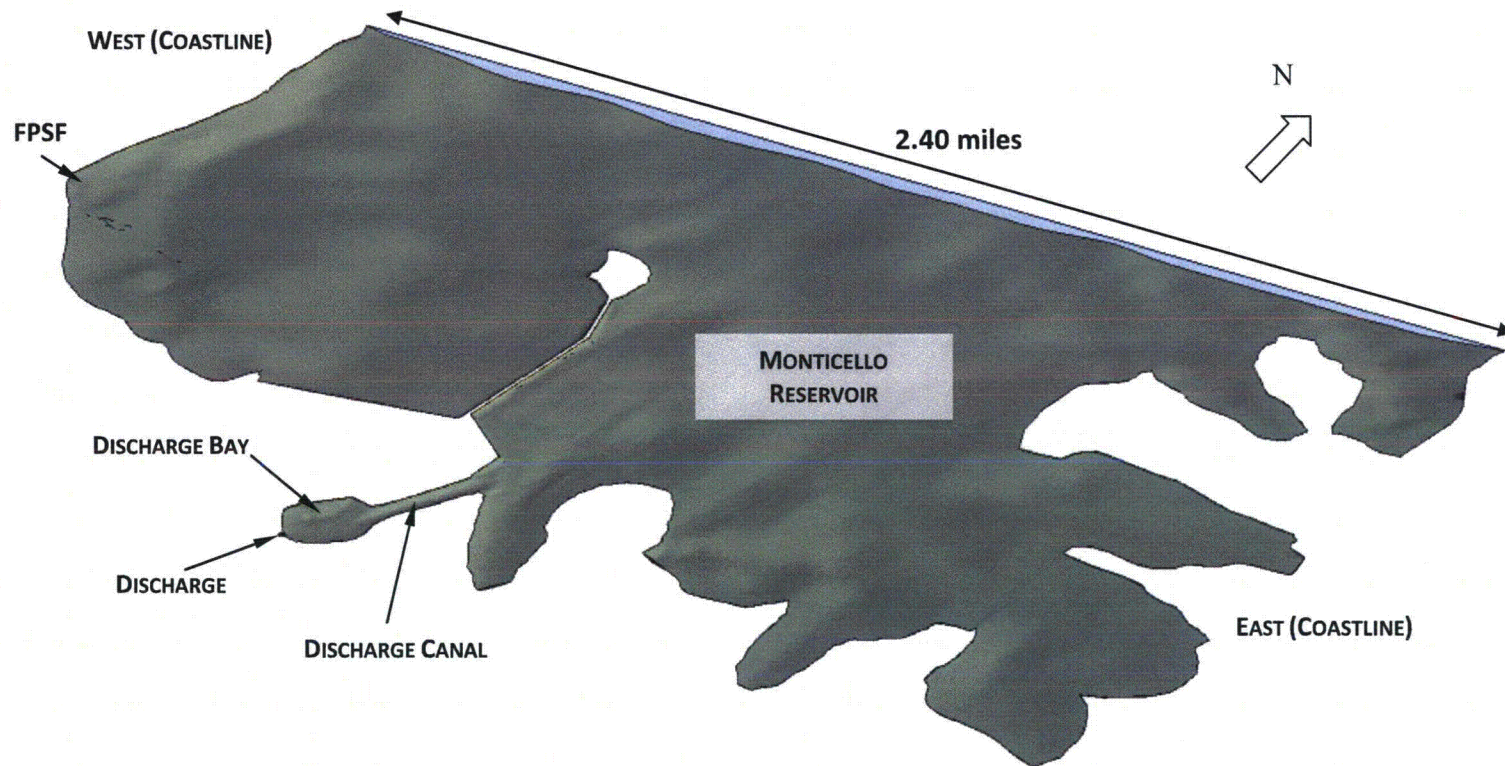


Figure 5 – Perspective view of the computational model.



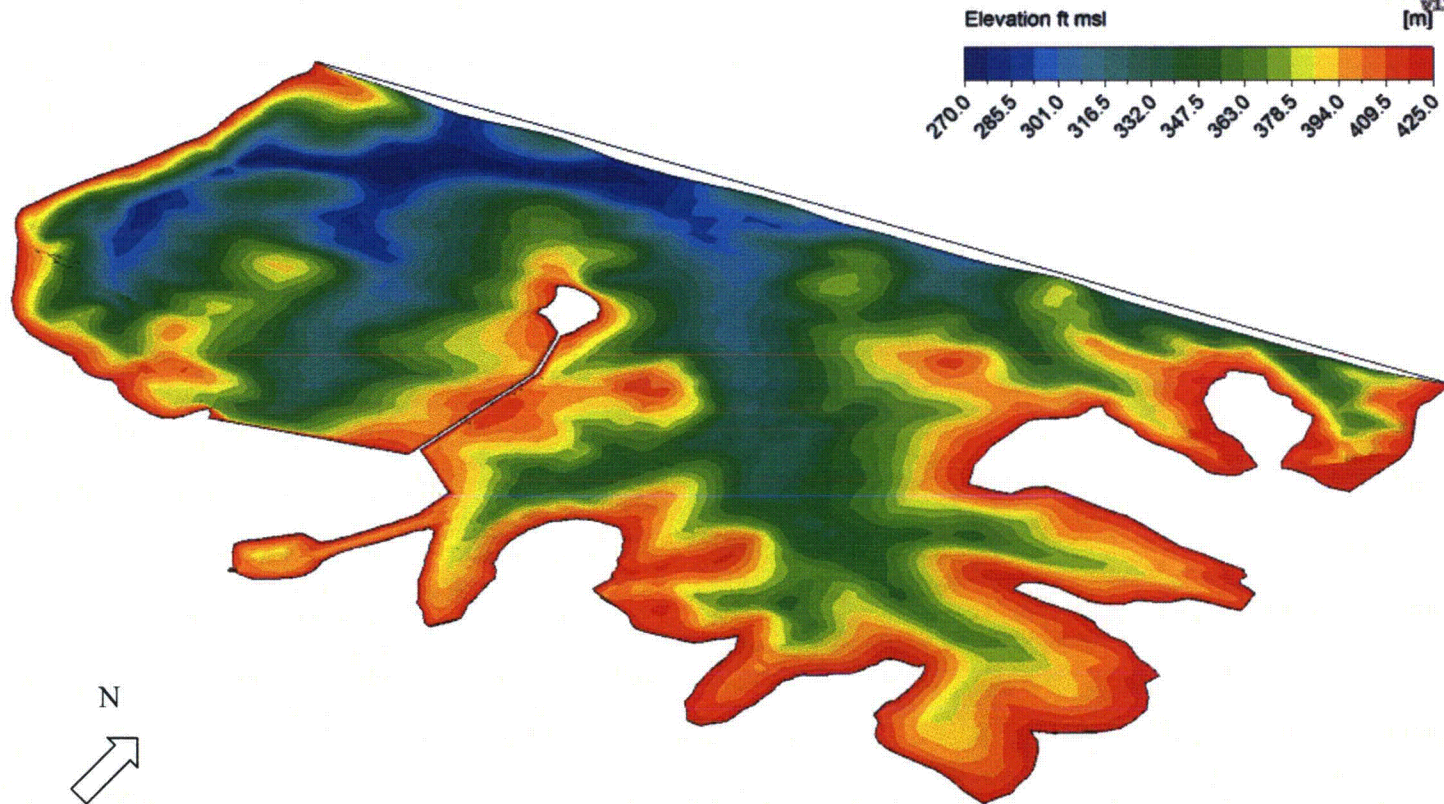


Figure 6 – Contour map showing surface elevation in the computational model.

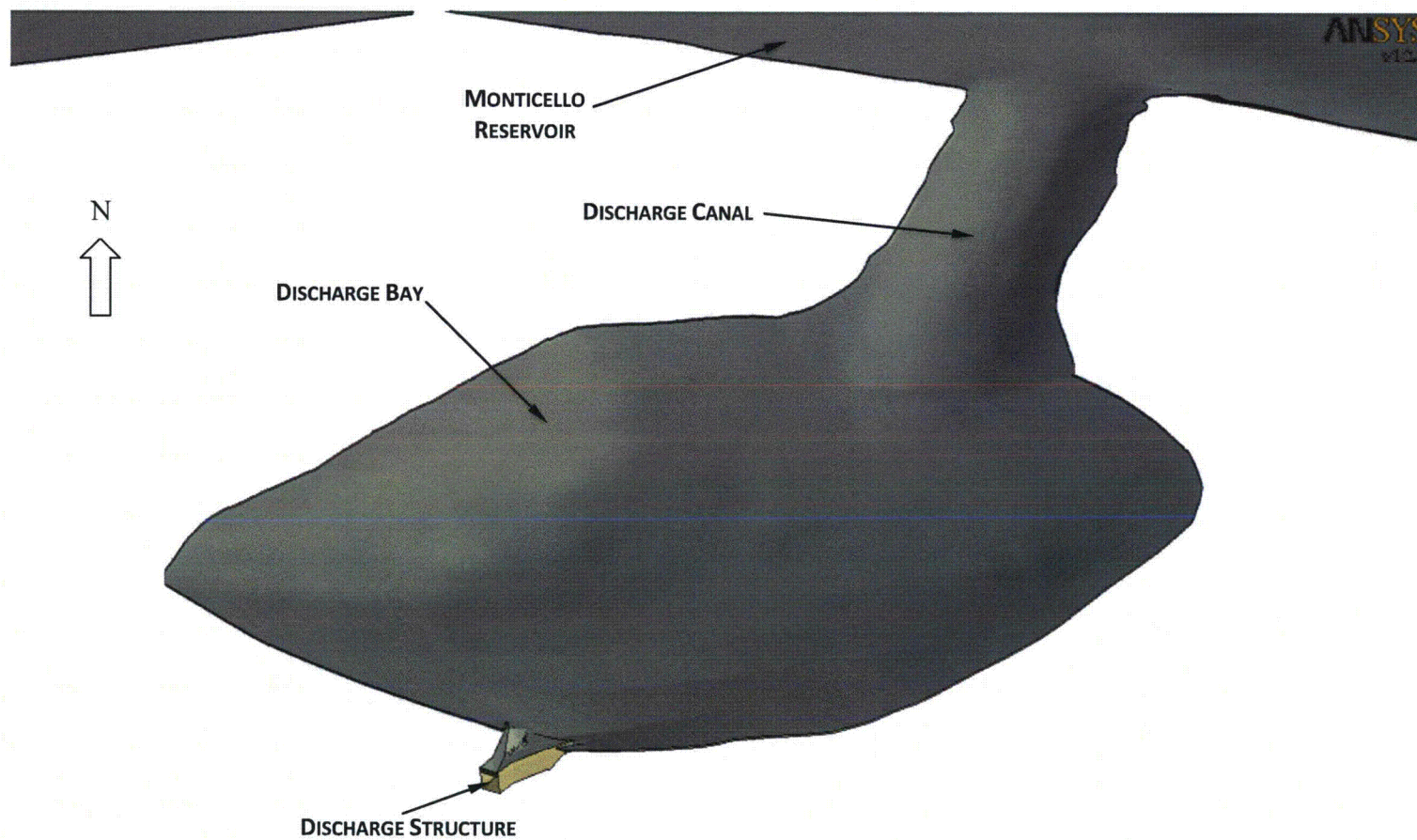


Figure 7 – View of the model near the discharge structure, bay and canal.



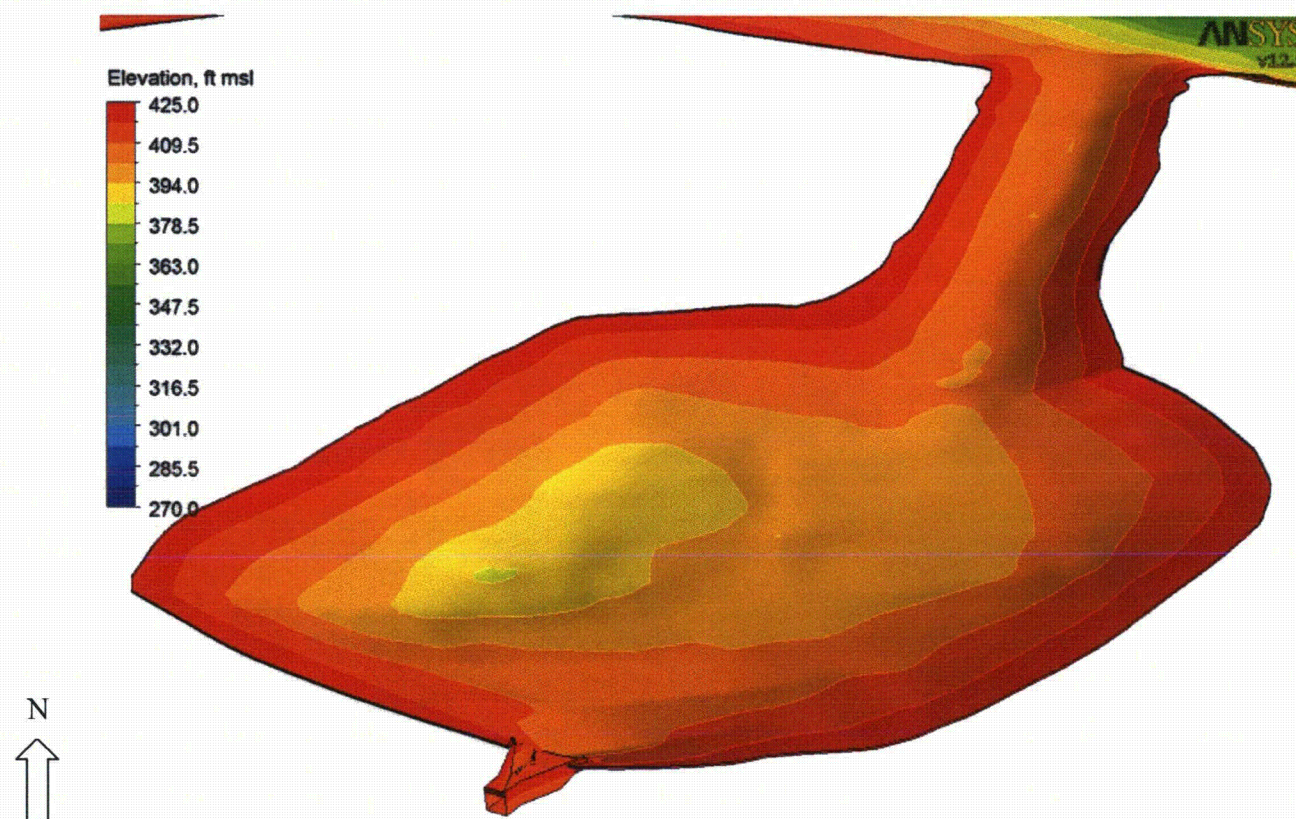


Figure 8 – Elevation contour plot near the discharge structure, bay and canal.



Figure 9 – Computational mesh.





Figure 10 – View of the computational mesh near the discharge structure.

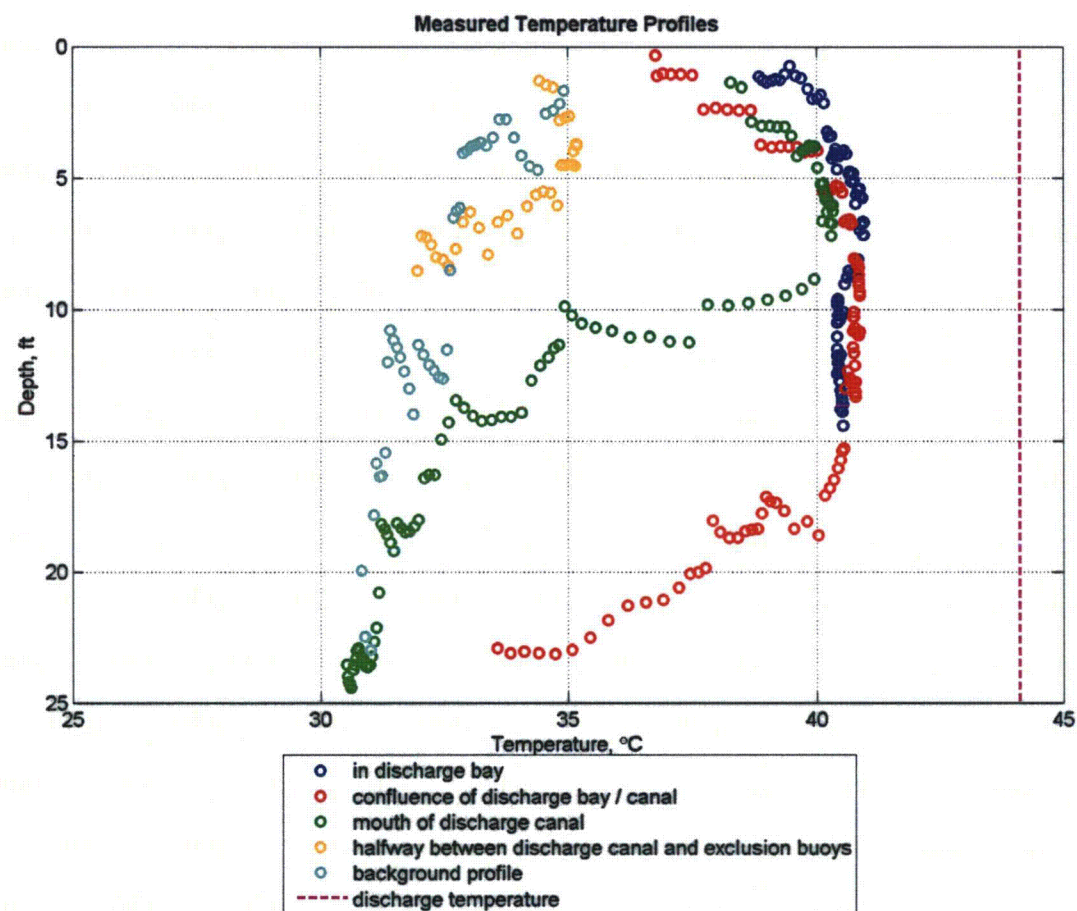


Figure 11 – Temperature profiles collected for validation.



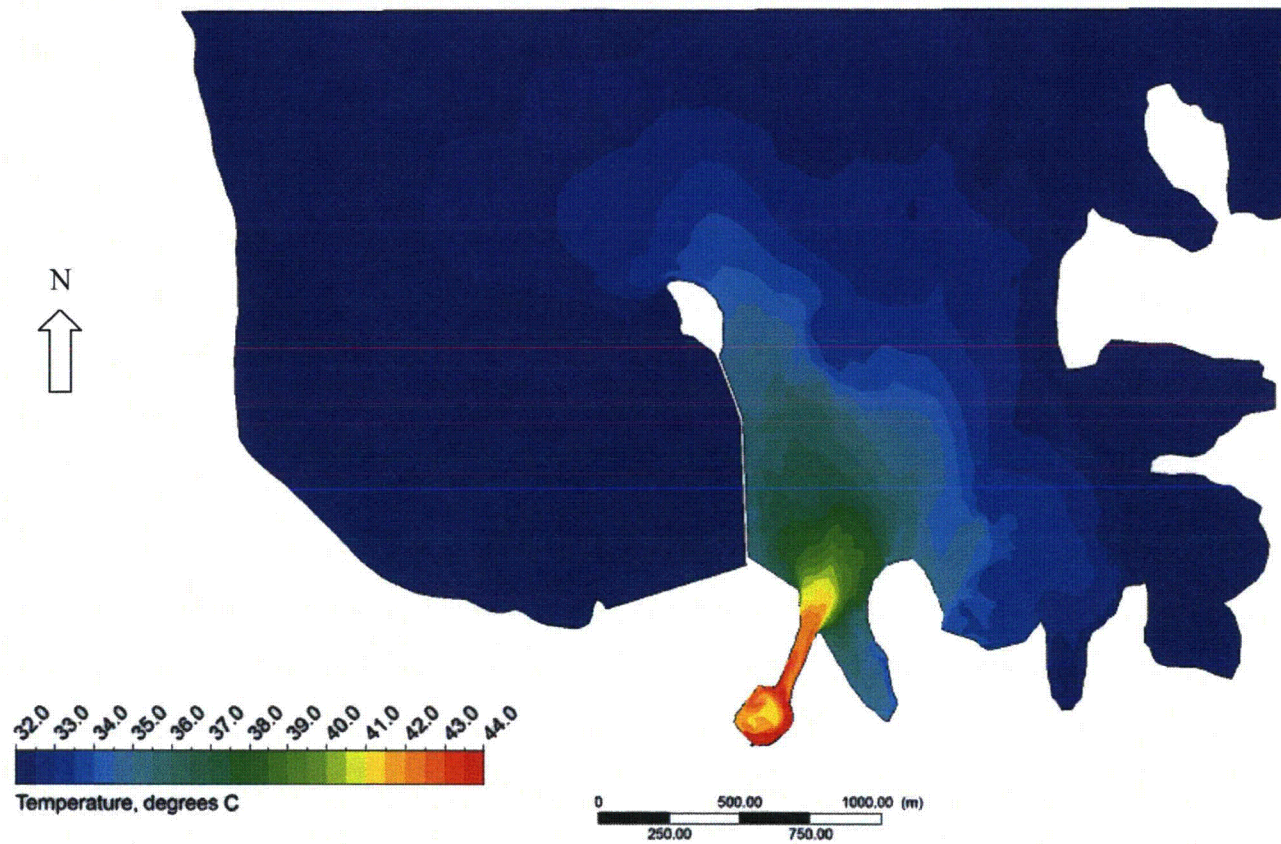


Figure 12 – Contour plot of surface temperature in the numerical model for validation.

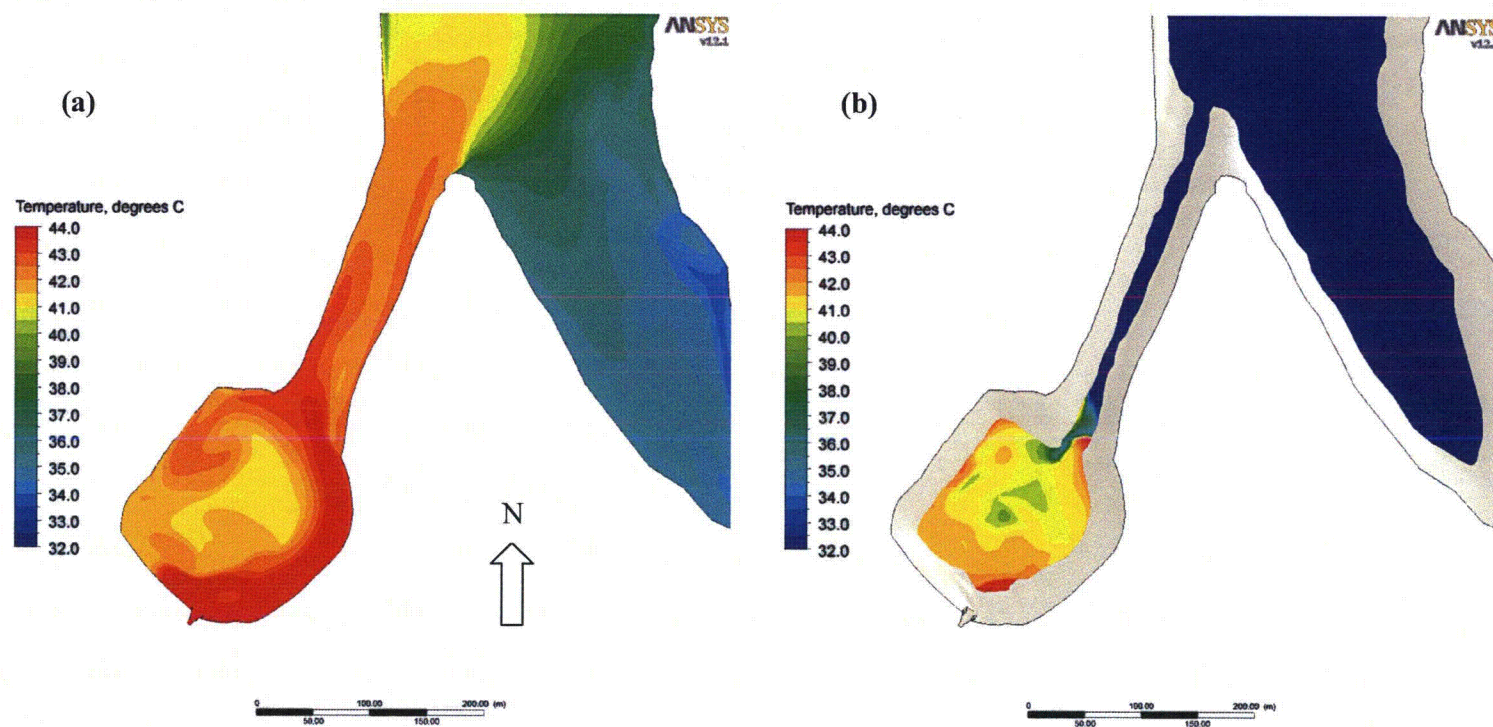


Figure 13 – Contour plot of temperature near the discharge bay at (a) the surface, and (b) 18 ft depth.



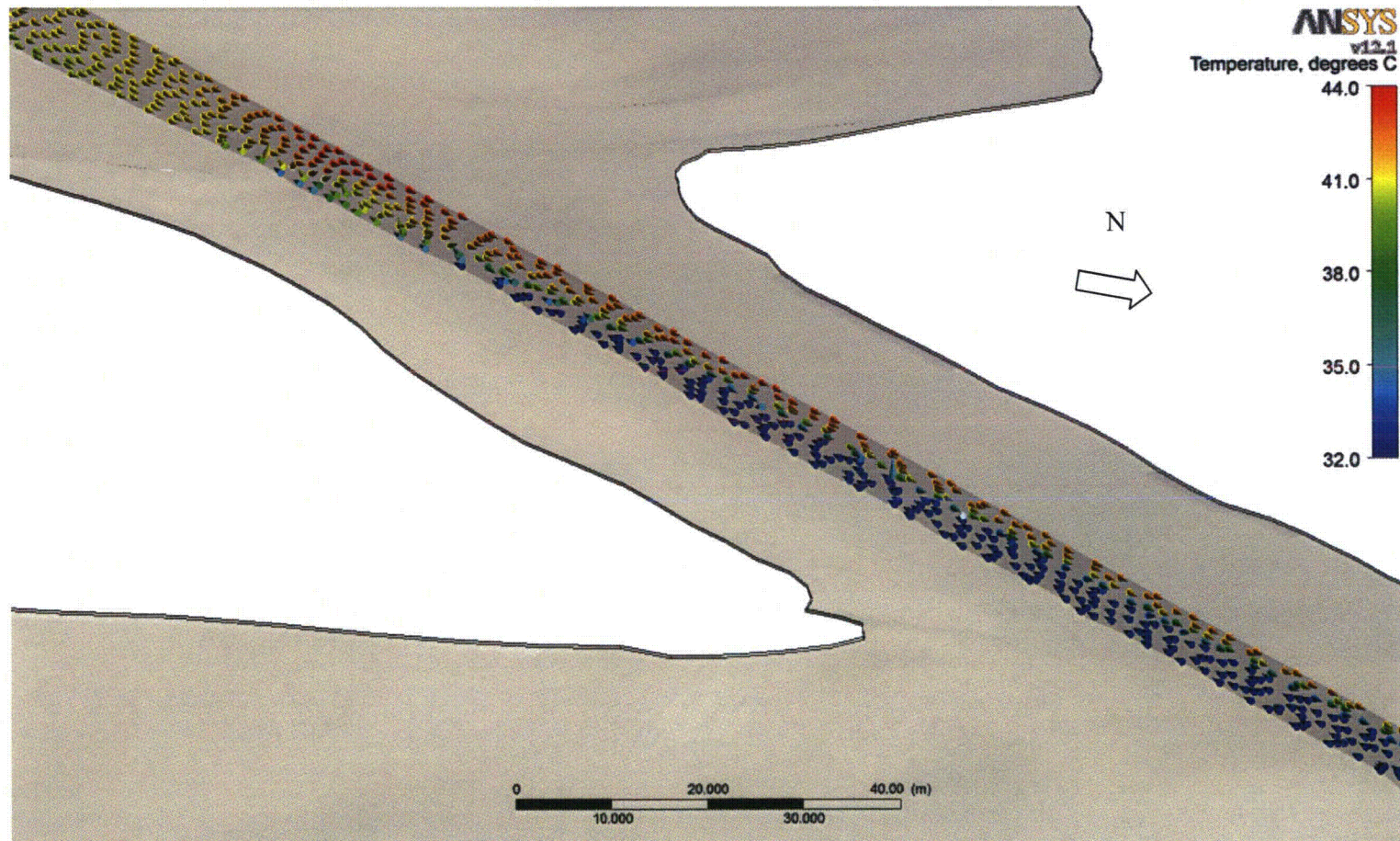


Figure 14 – Velocity vectors in the discharge canal colored by temperature.

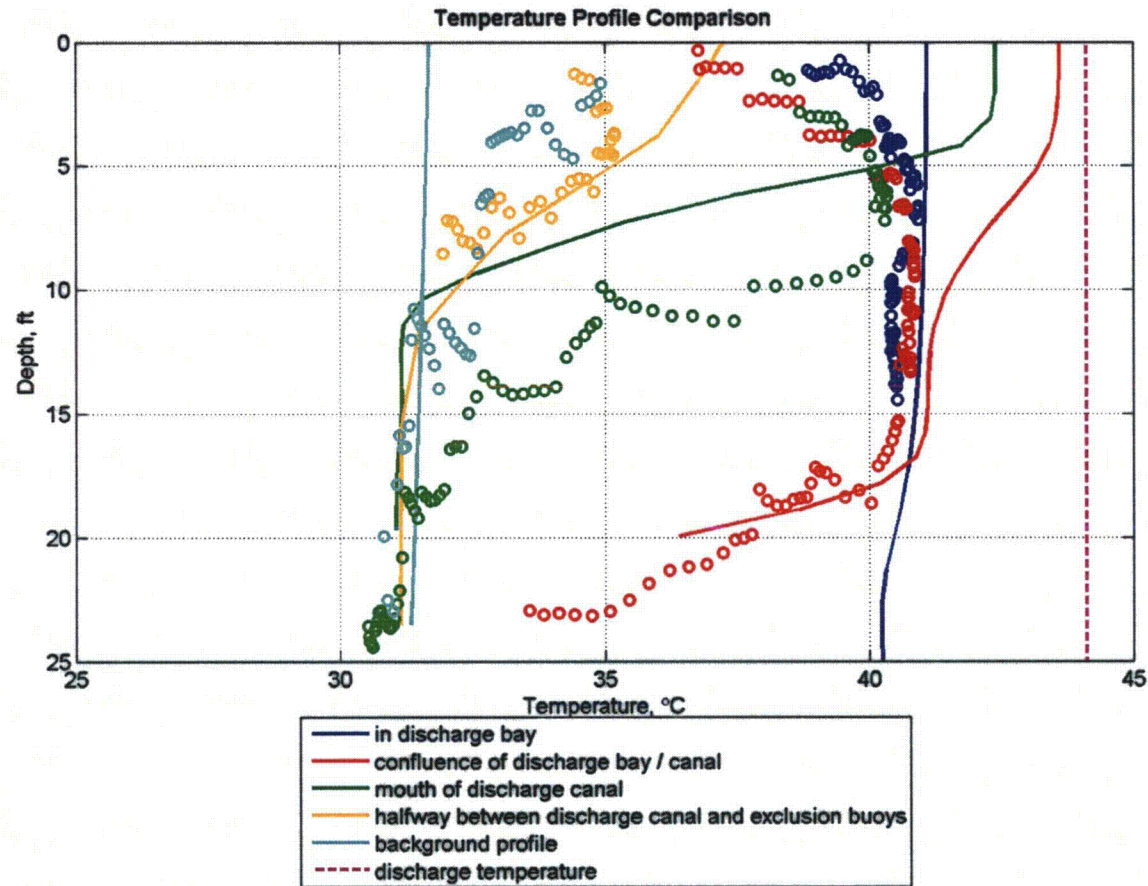


Figure 15 – Comparison between the CFD and collected temperature data.



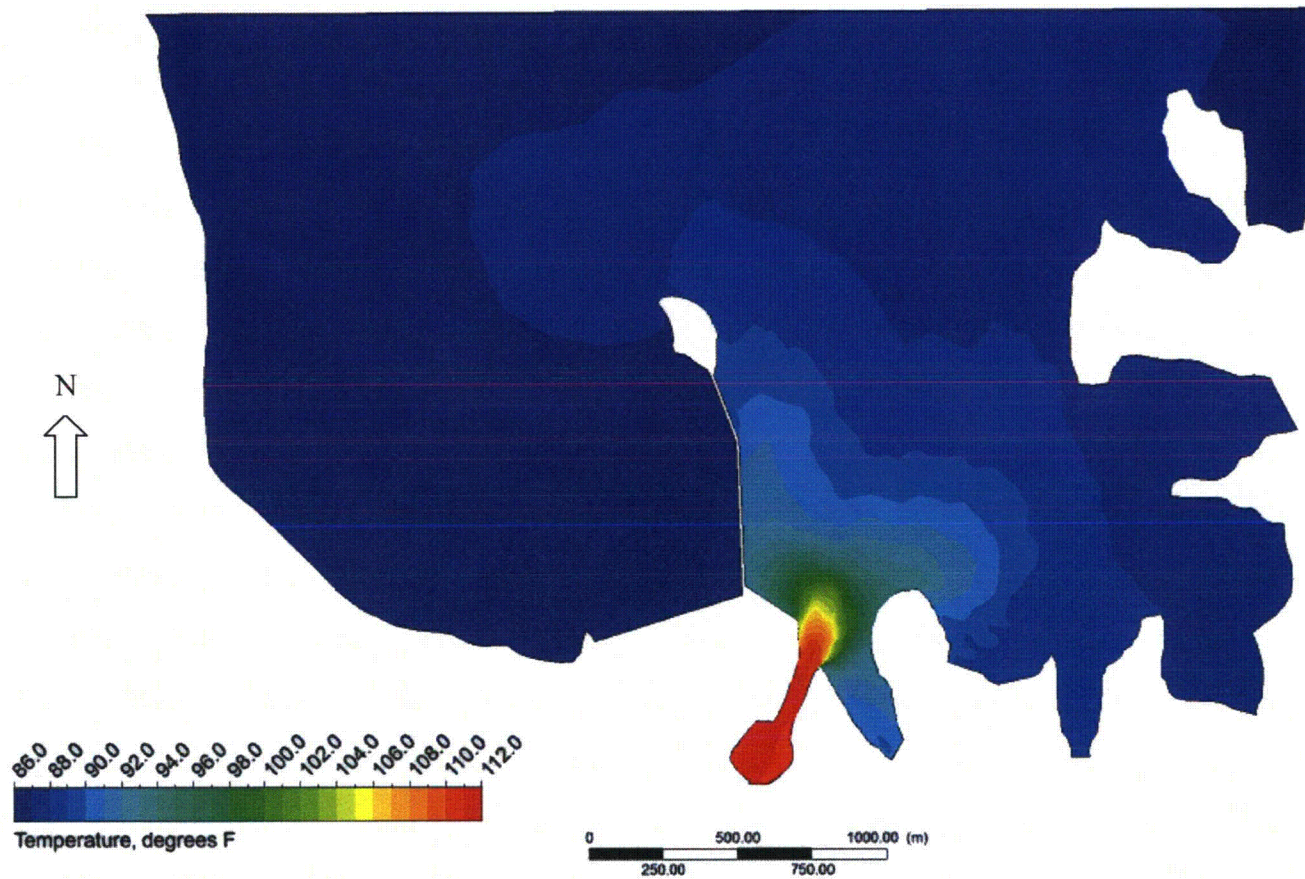


Figure 16 – Scenario 1S, surface temperature.

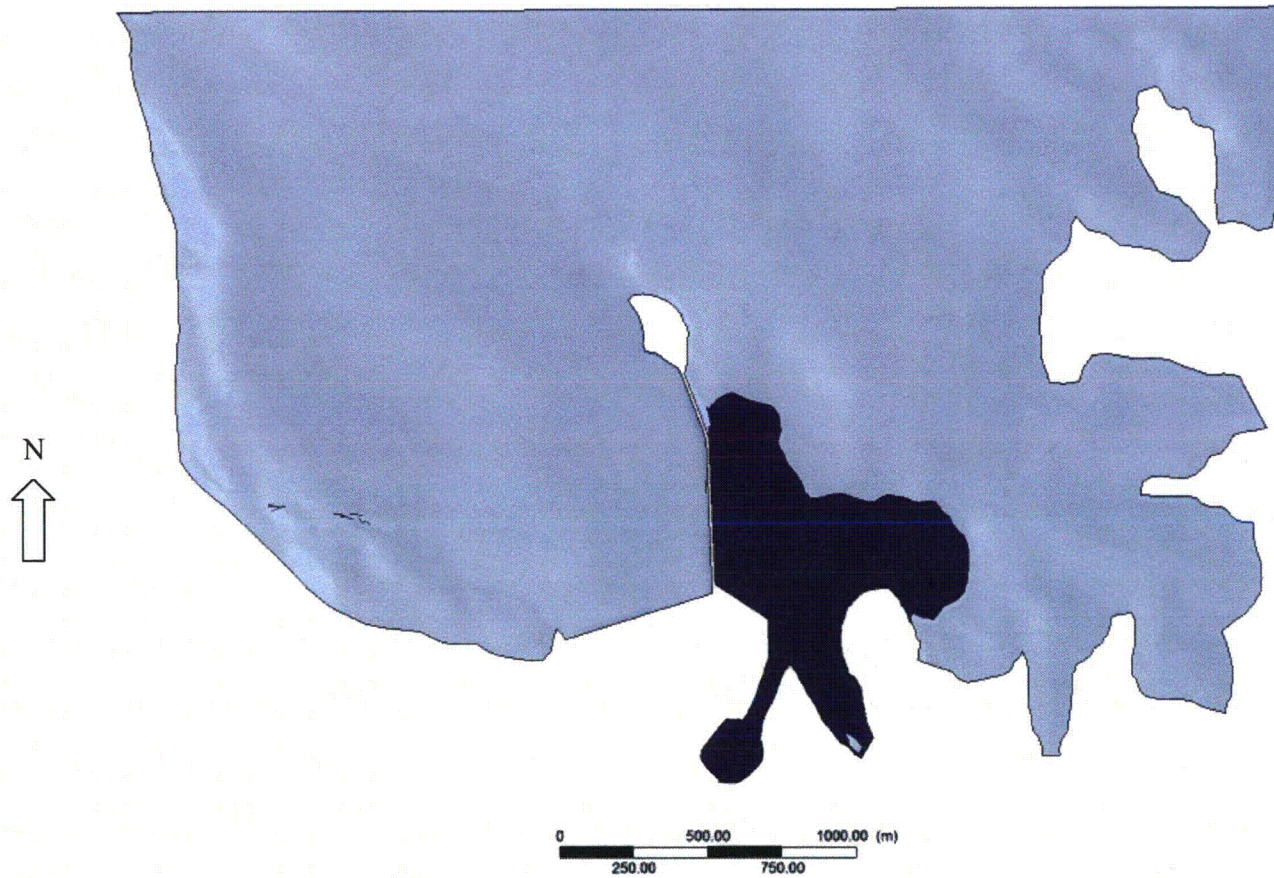


Figure 17 – Scenario 1S, 90°F thermal plume (purple).



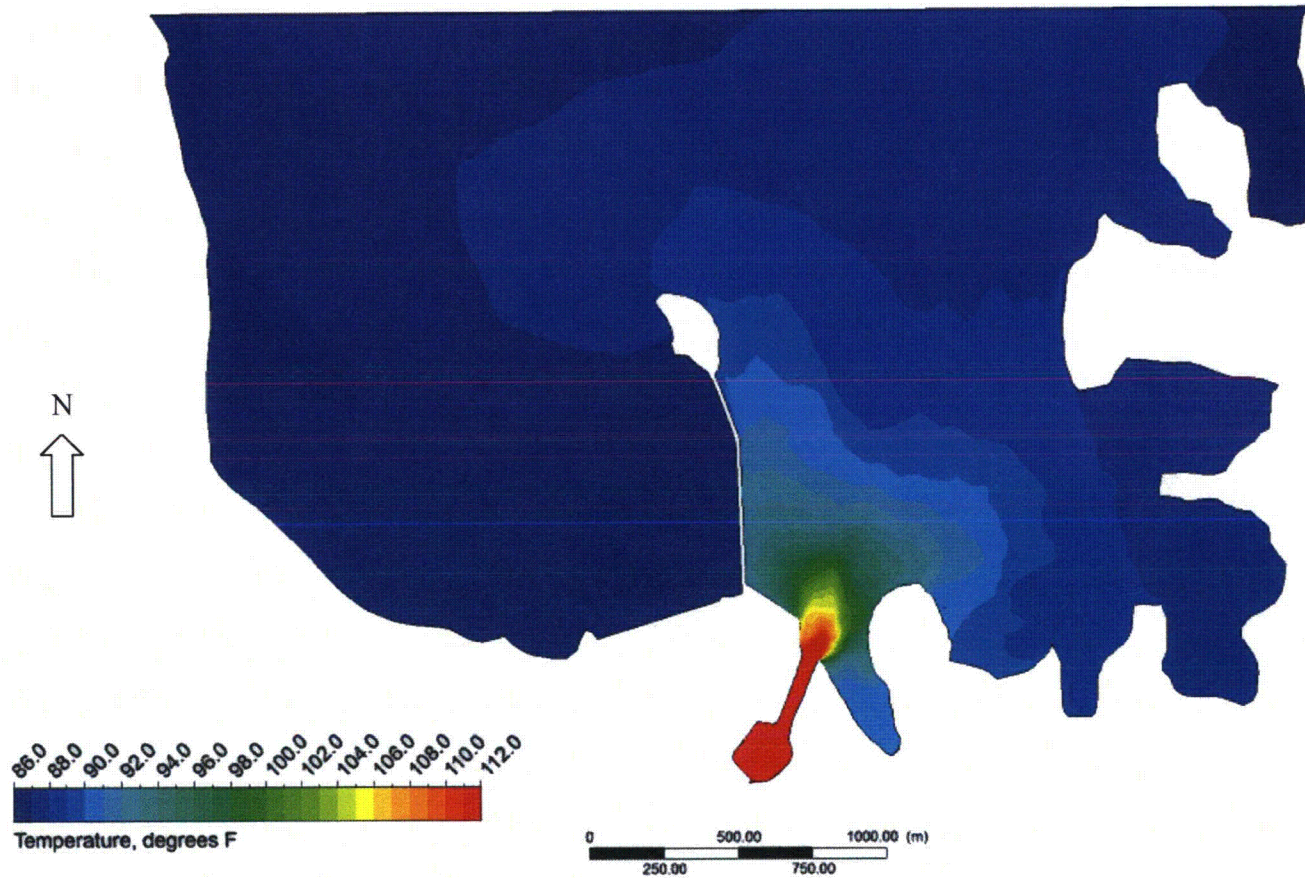


Figure 18 – Scenario 2S, surface temperature.

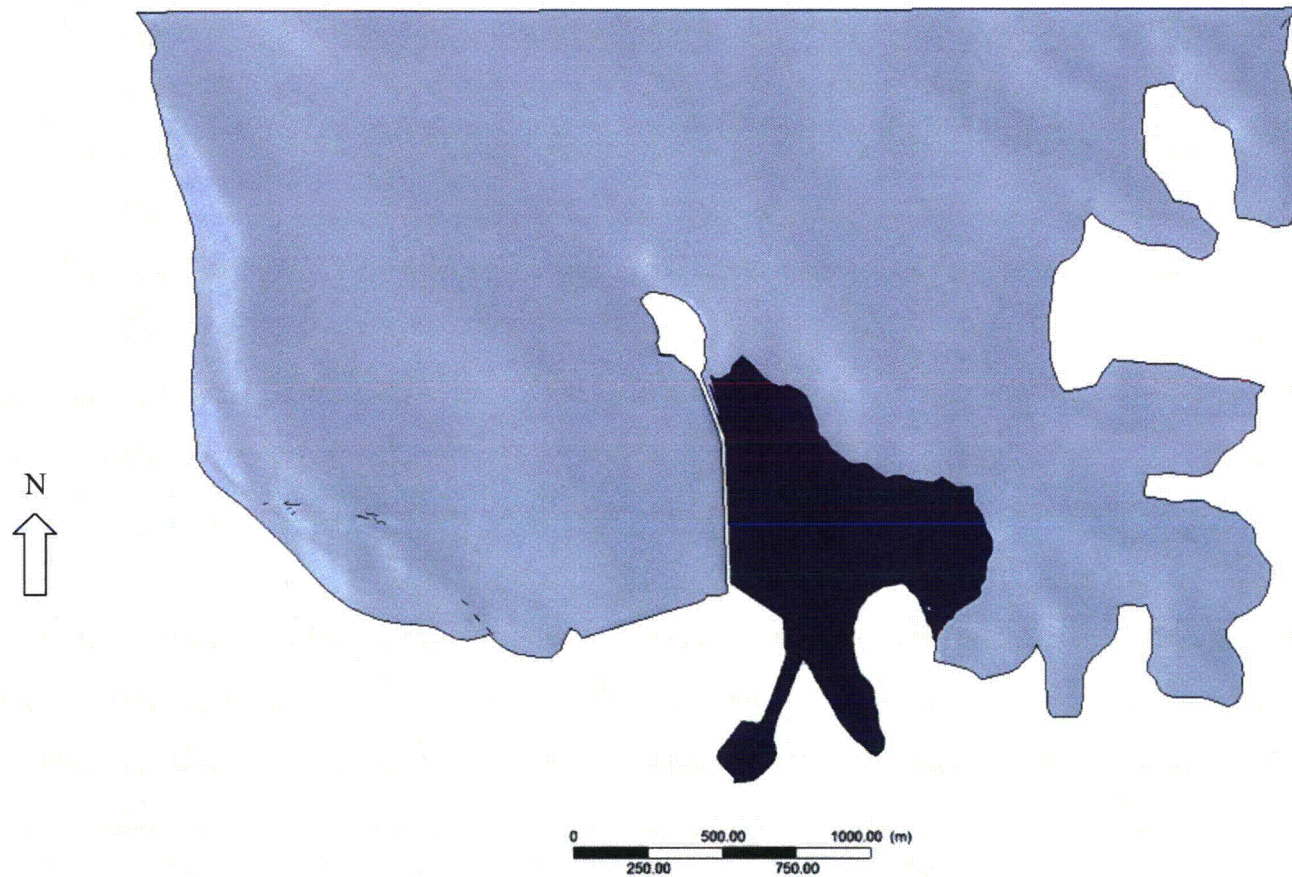


Figure 19 – Scenario 2S, 90°F thermal plume (purple).



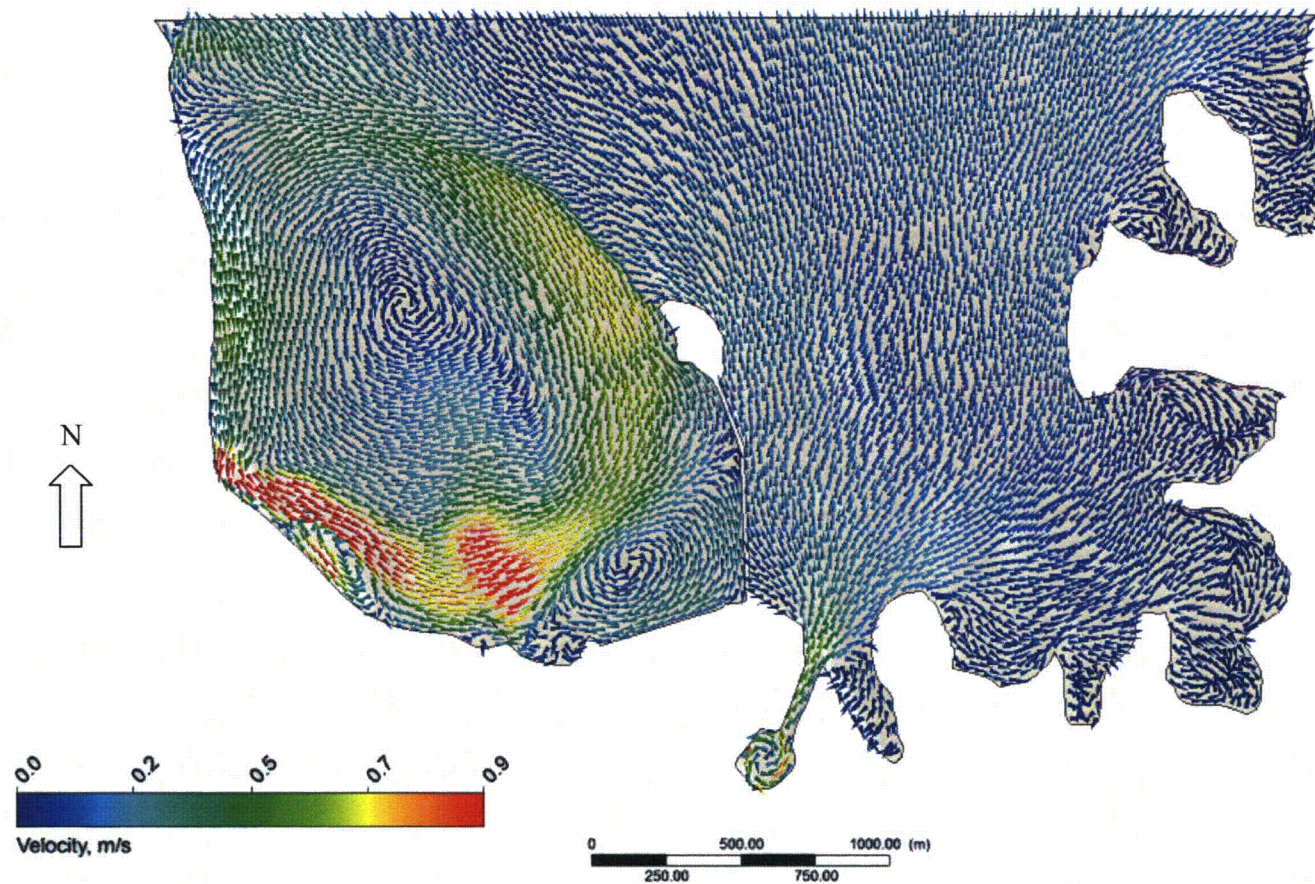


Figure 20 – Scenario 3S, surface velocity vectors.

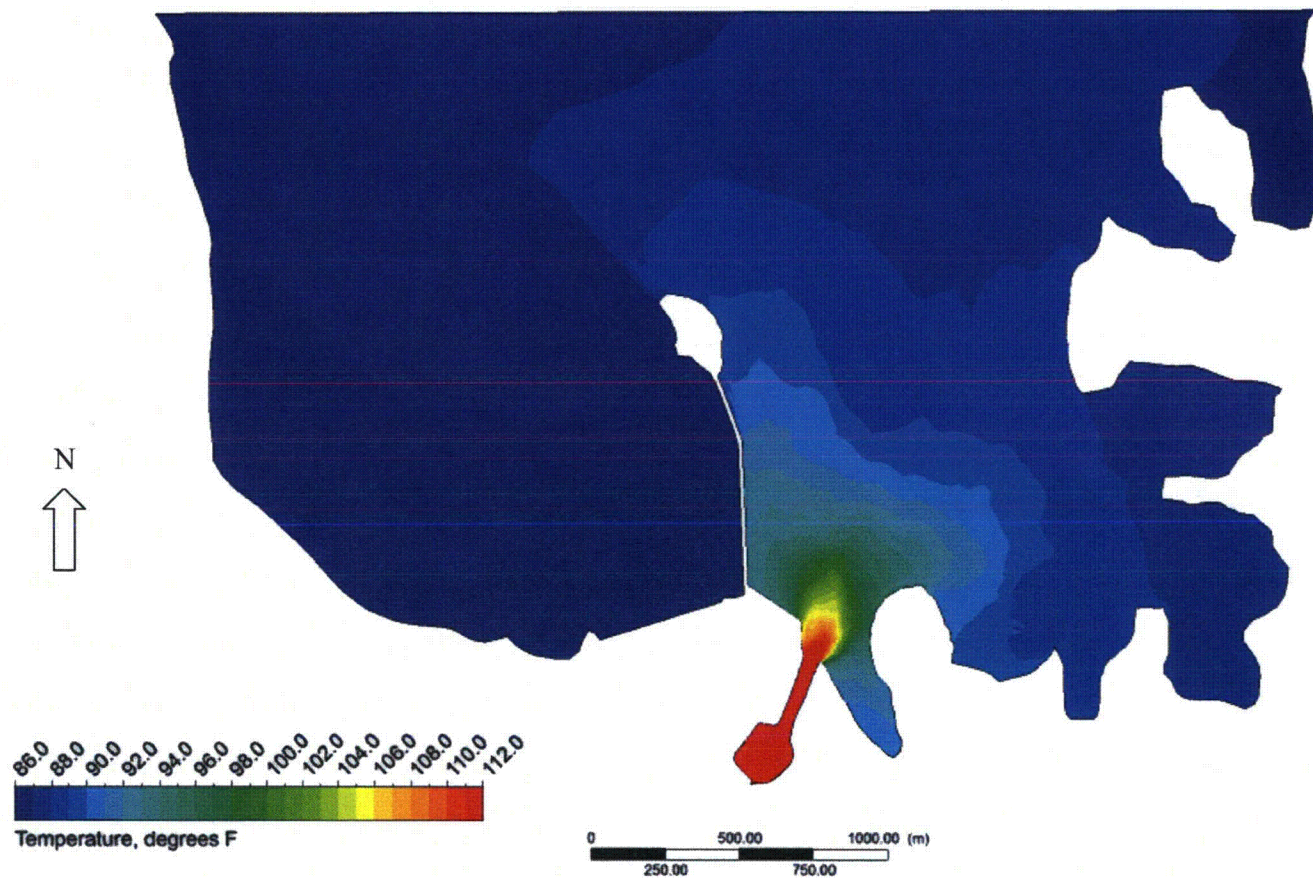


Figure 21 – Scenario 3S, surface temperature.



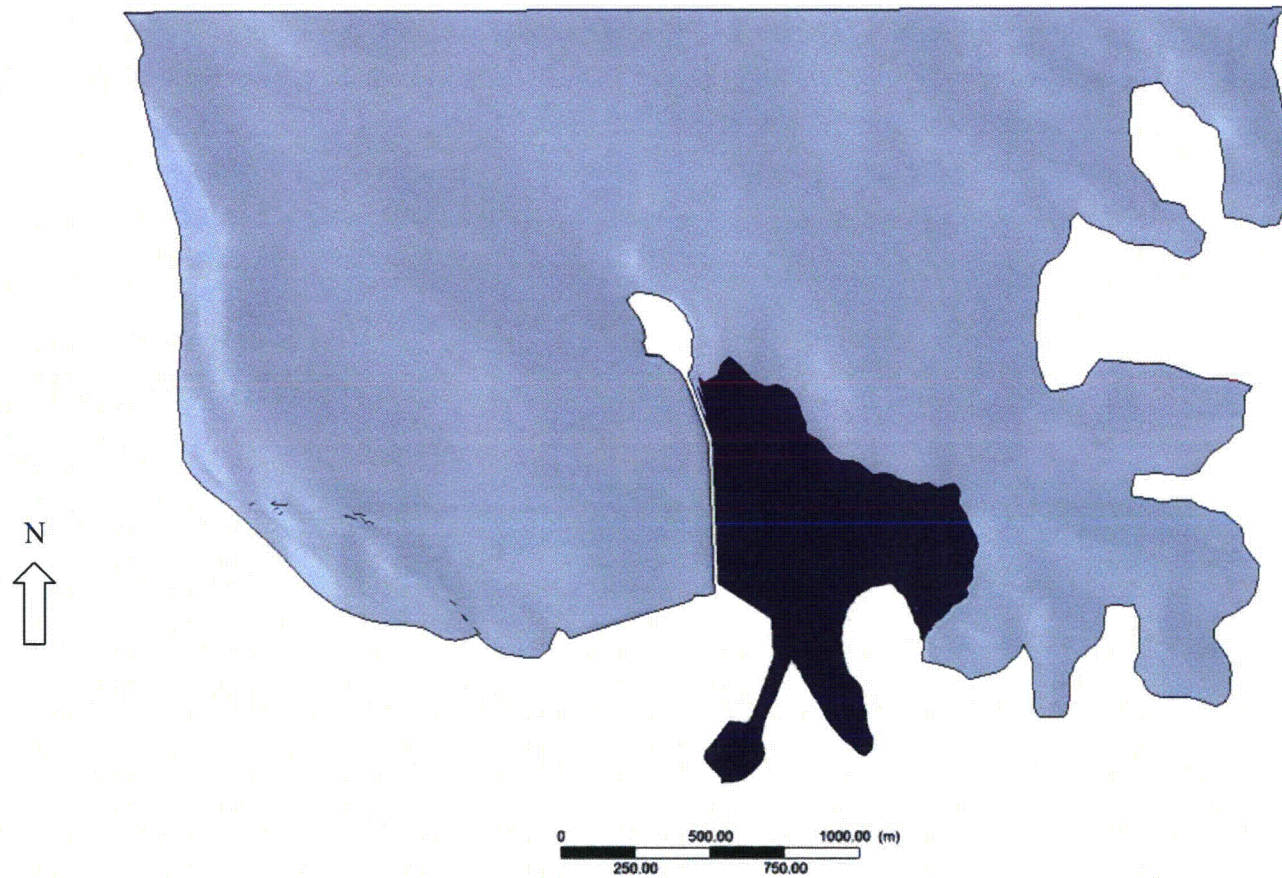


Figure 22 – Scenario 3S, 90°F thermal plume (purple).

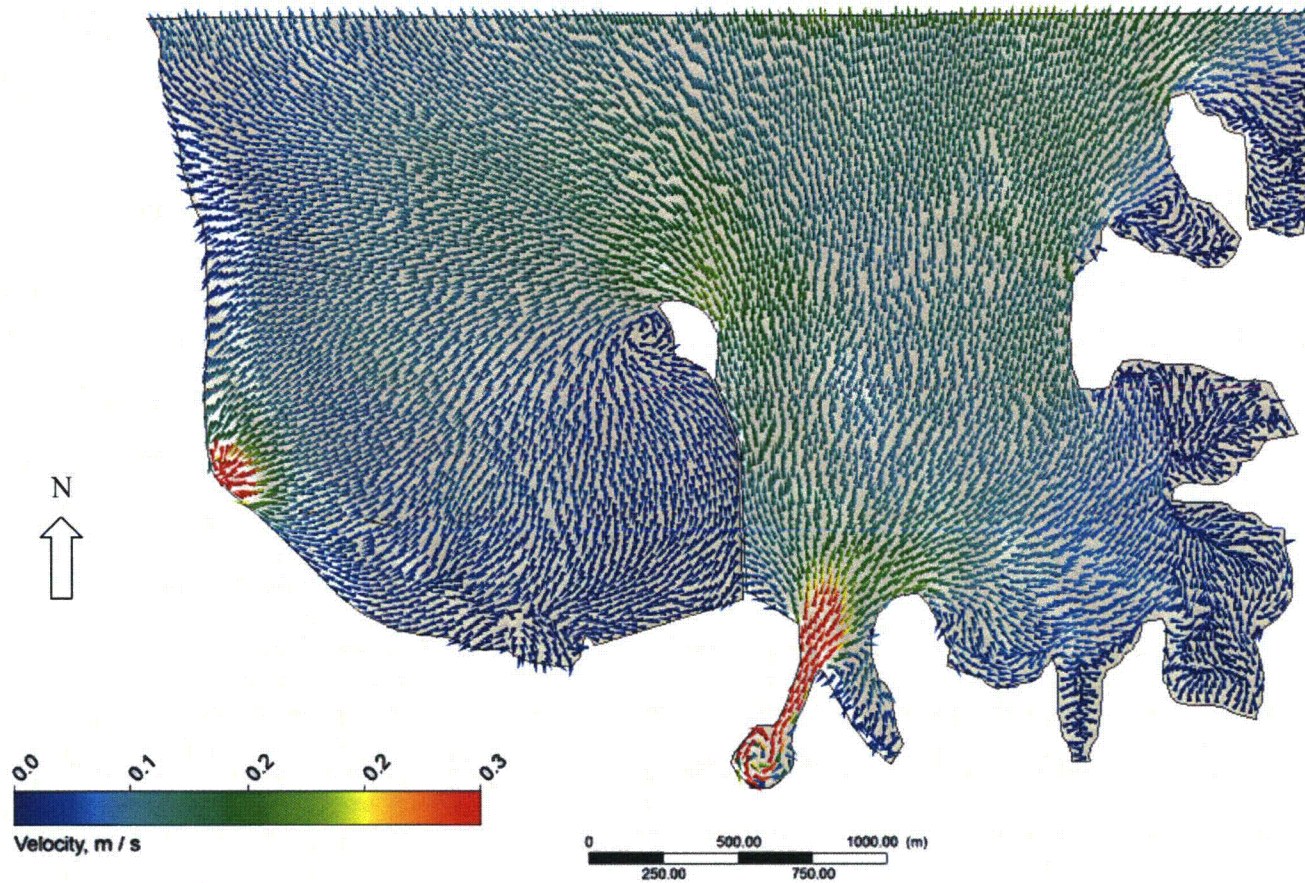


Figure 23 – Scenario 4S, surface velocity vectors.



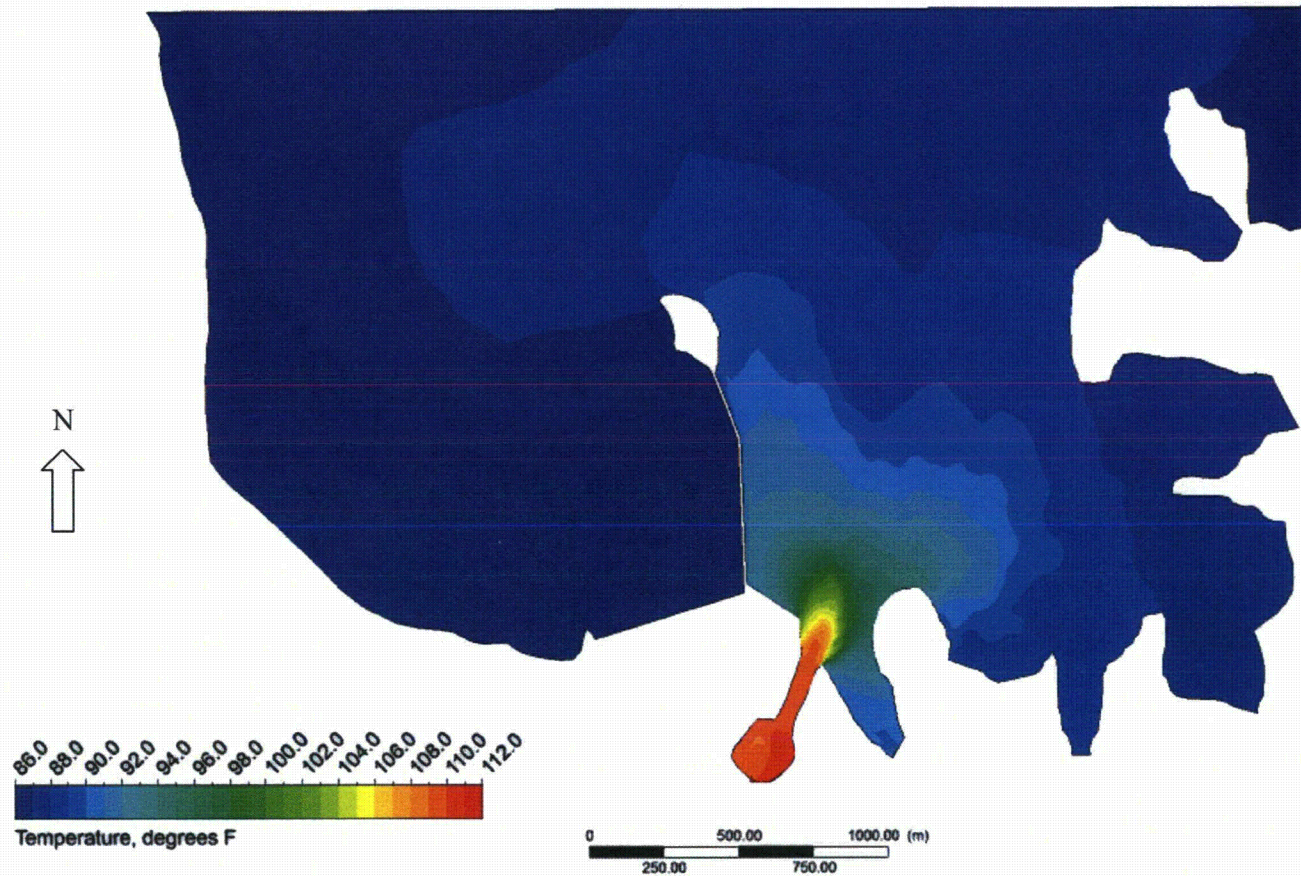


Figure 24 – Scenario 4S, surface temperature.

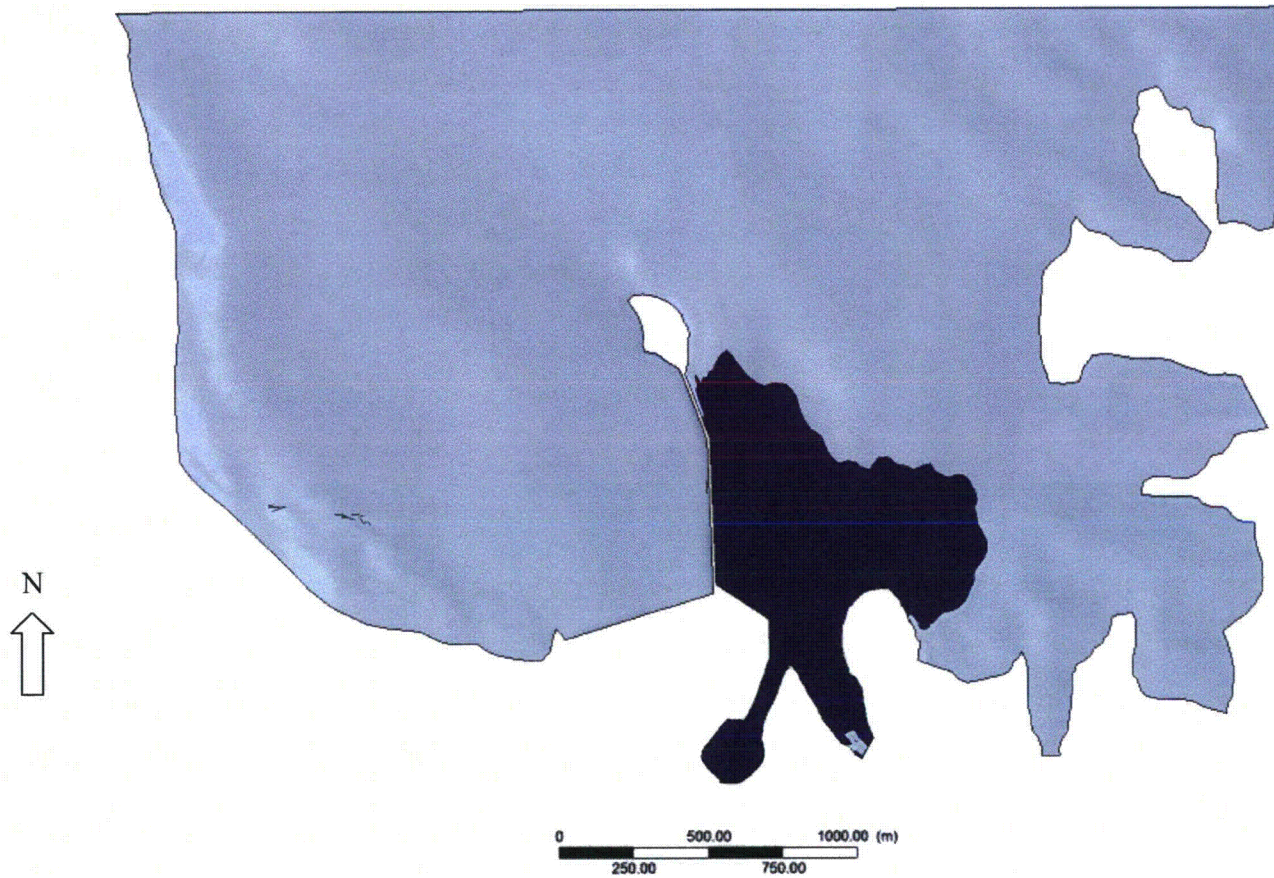


Figure 25 – Scenario 4S, 90°F thermal plume (purple).



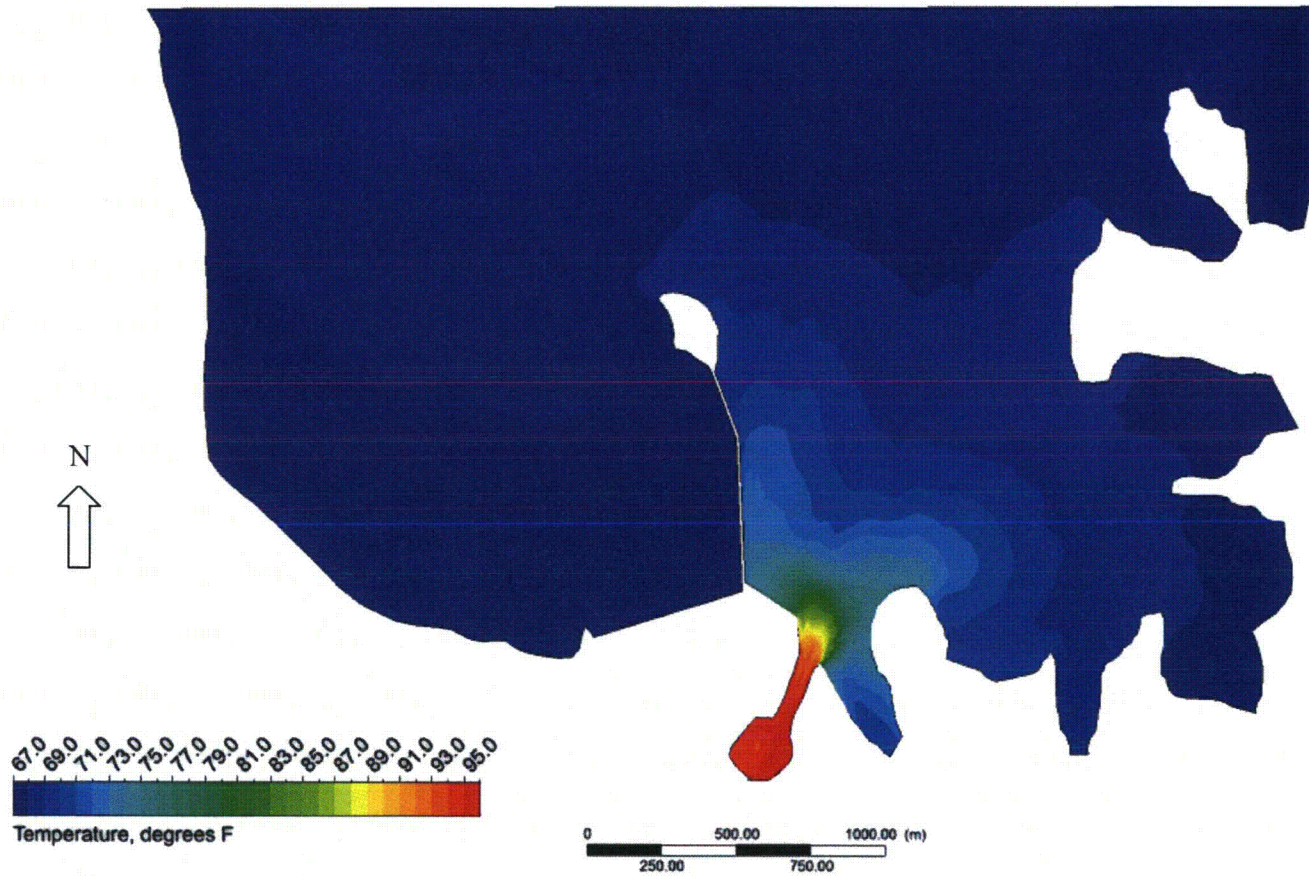


Figure 26 – Scenario 1W, surface temperature.

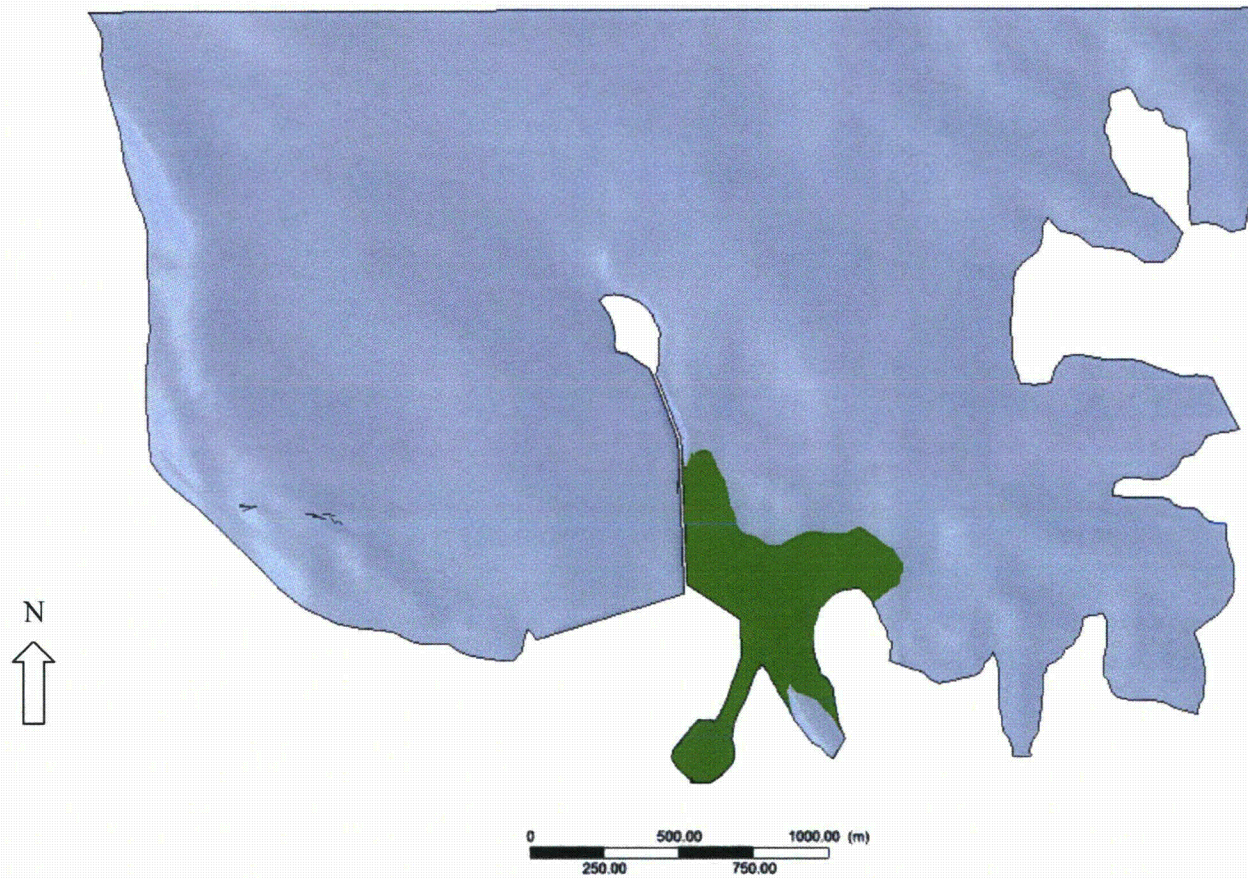


Figure 27 – Scenario 1W,  $\Delta T = 5^{\circ}\text{F}$  thermal plume (green).



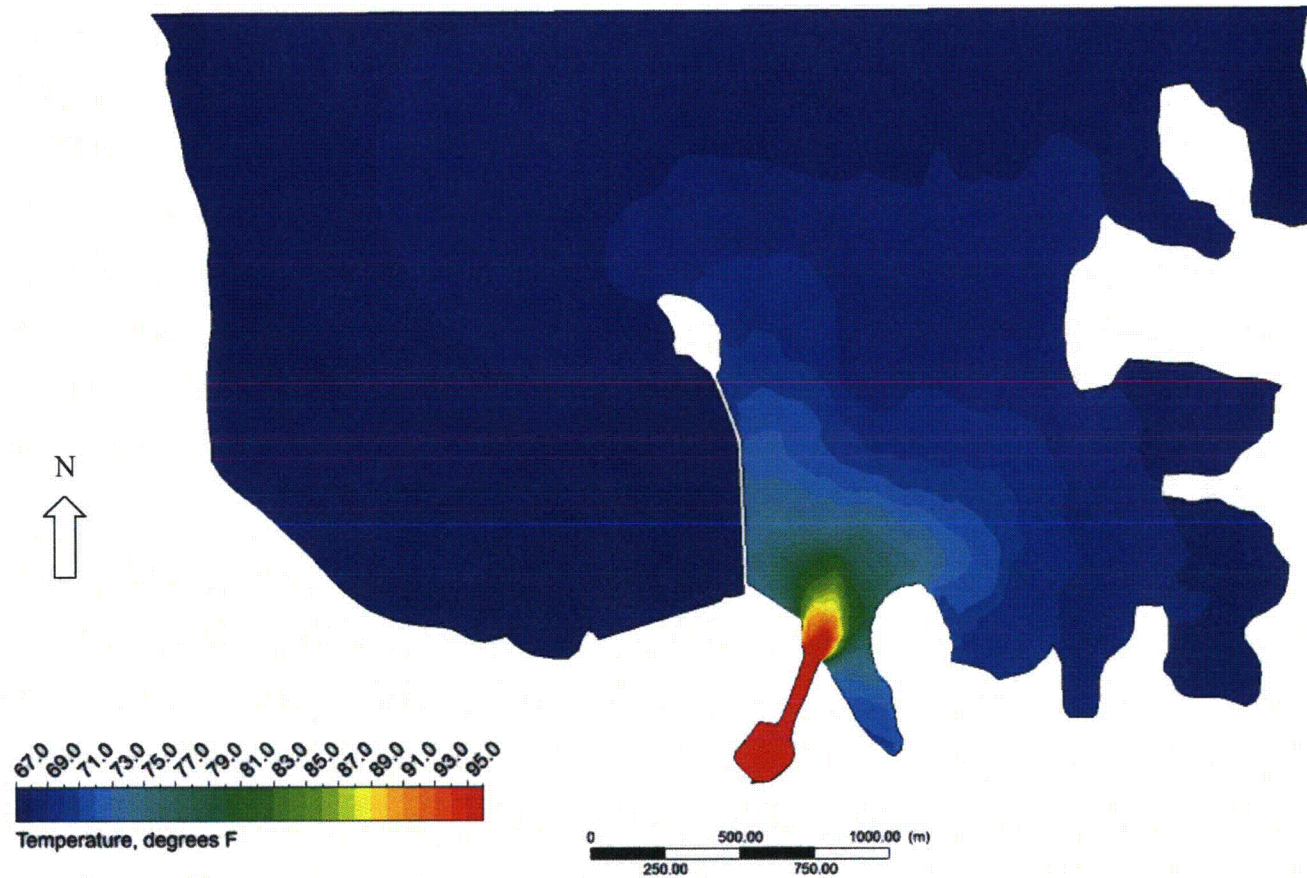


Figure 28 – Scenario 2W, surface temperature.

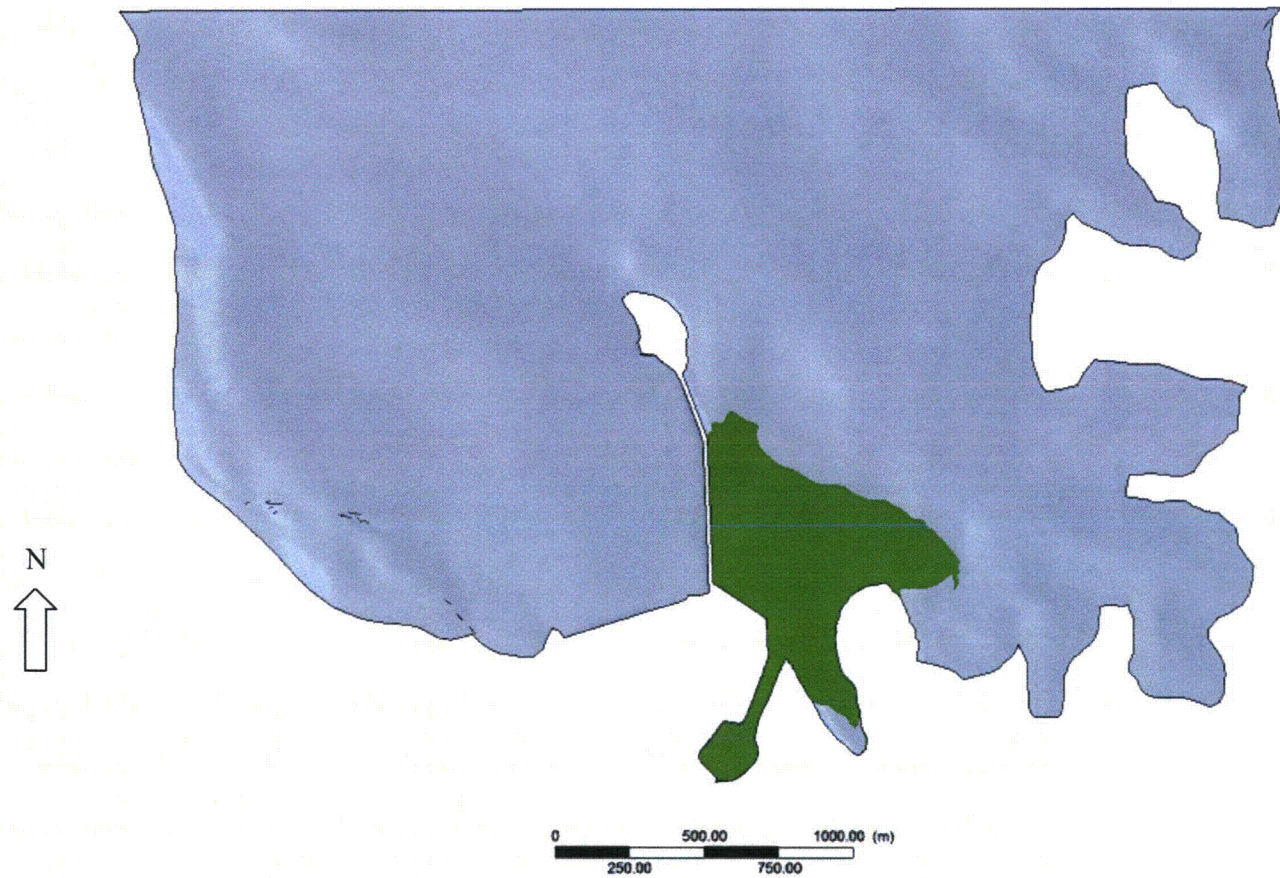


Figure 29 – Scenario 2W,  $\Delta T = 5^{\circ}\text{F}$  thermal plume (green).



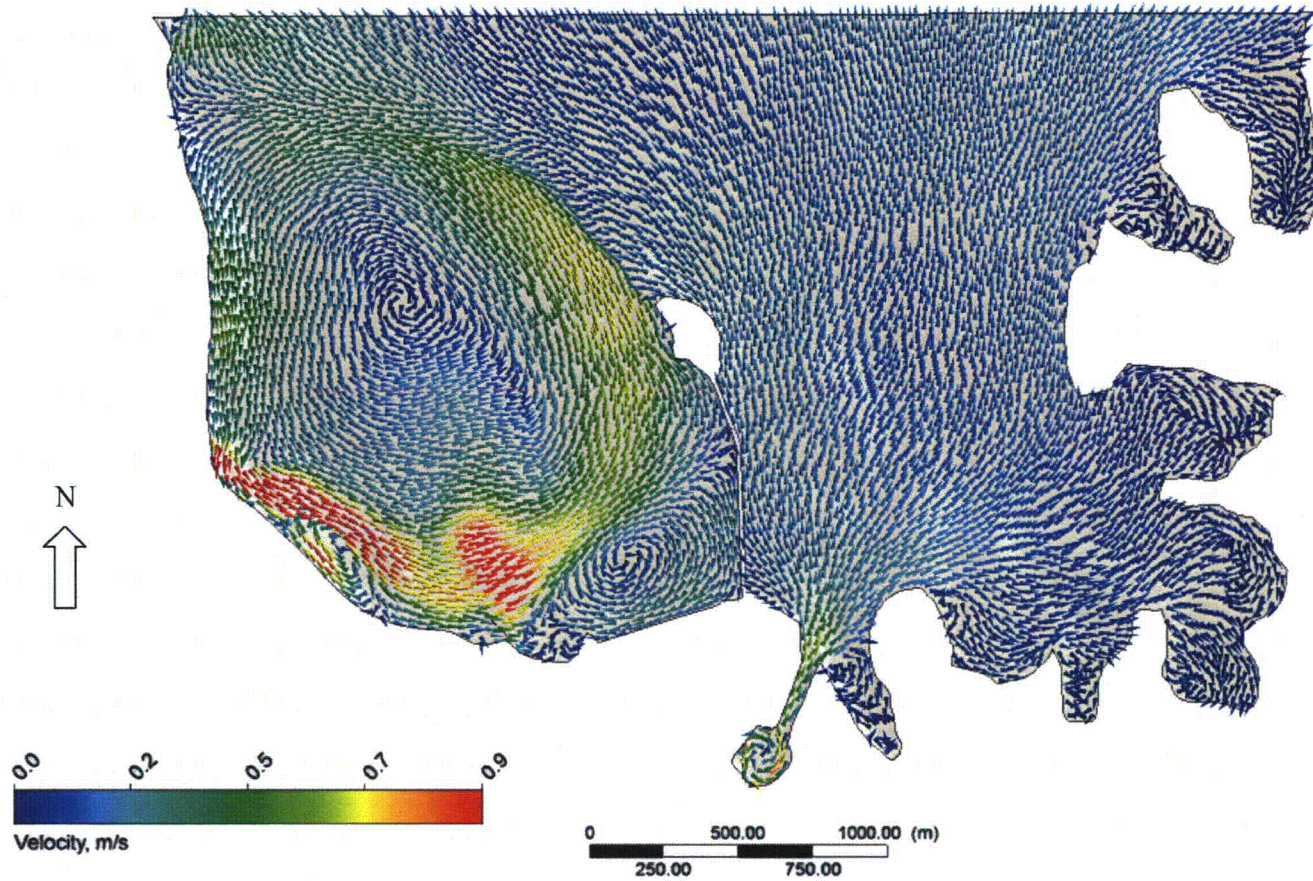


Figure 30 – Scenario 3W, surface velocity vectors

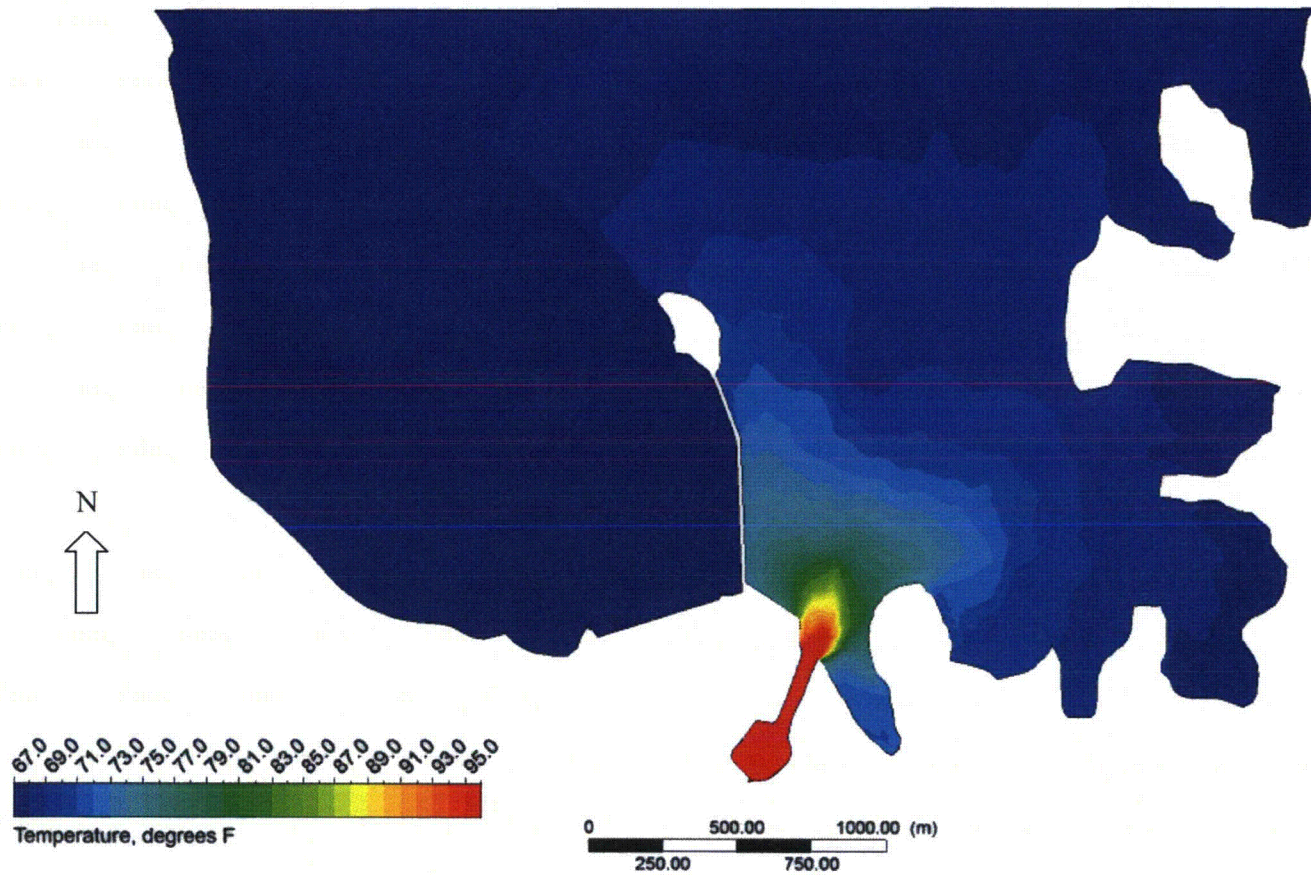


Figure 31 – Scenario 3W, surface temperature.



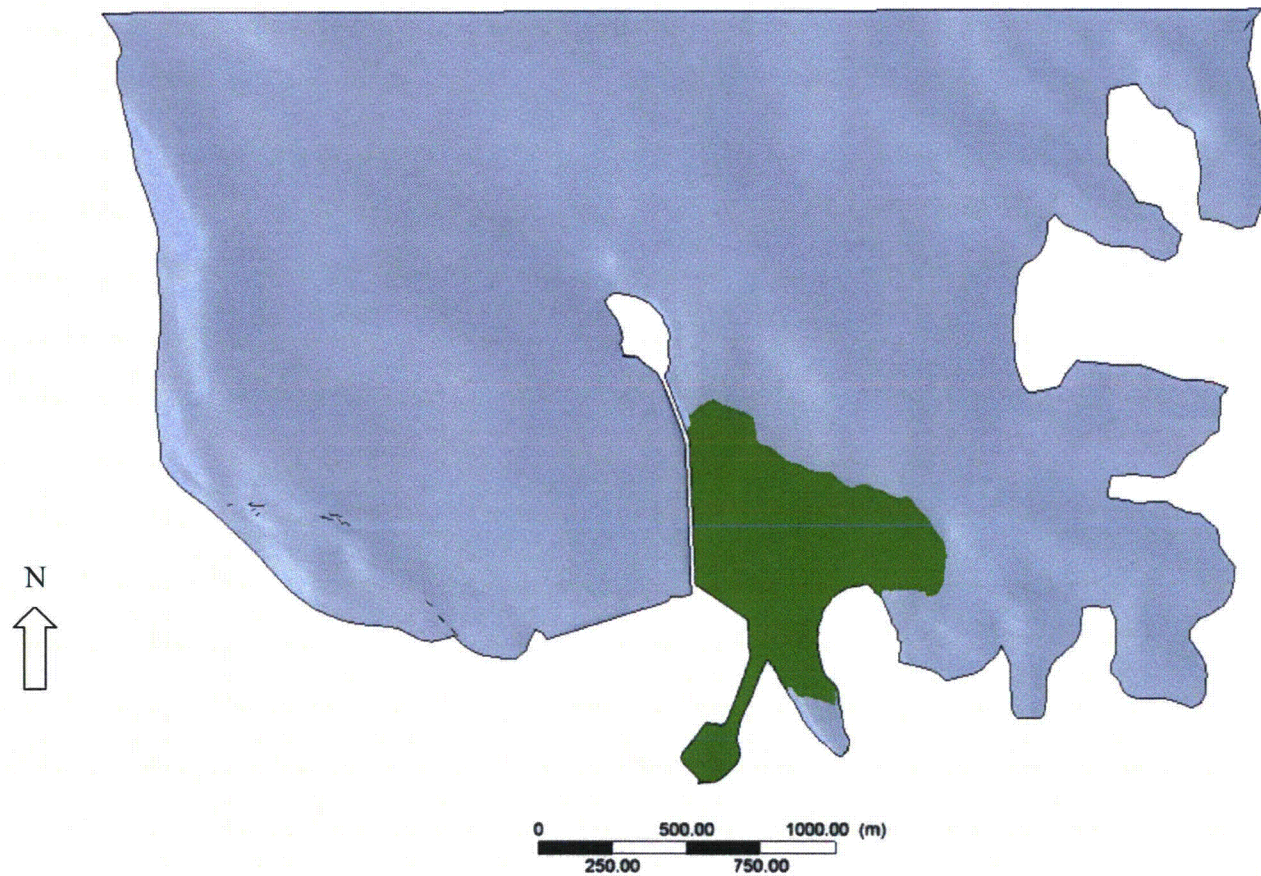


Figure 32 – Scenario 3W,  $\Delta T = 5^{\circ}\text{F}$  thermal plume (green).

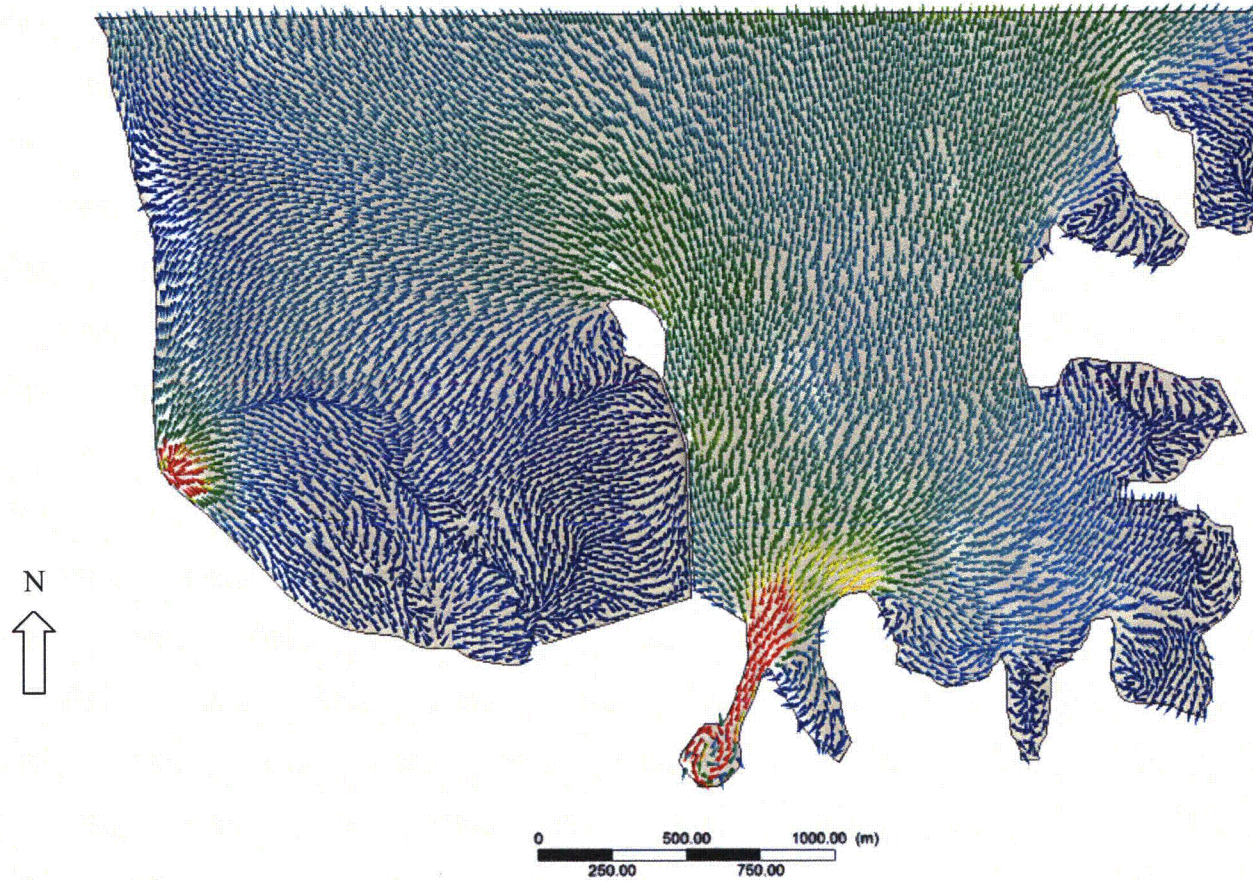


Figure 33 – Scenario 4W, surface velocity vectors



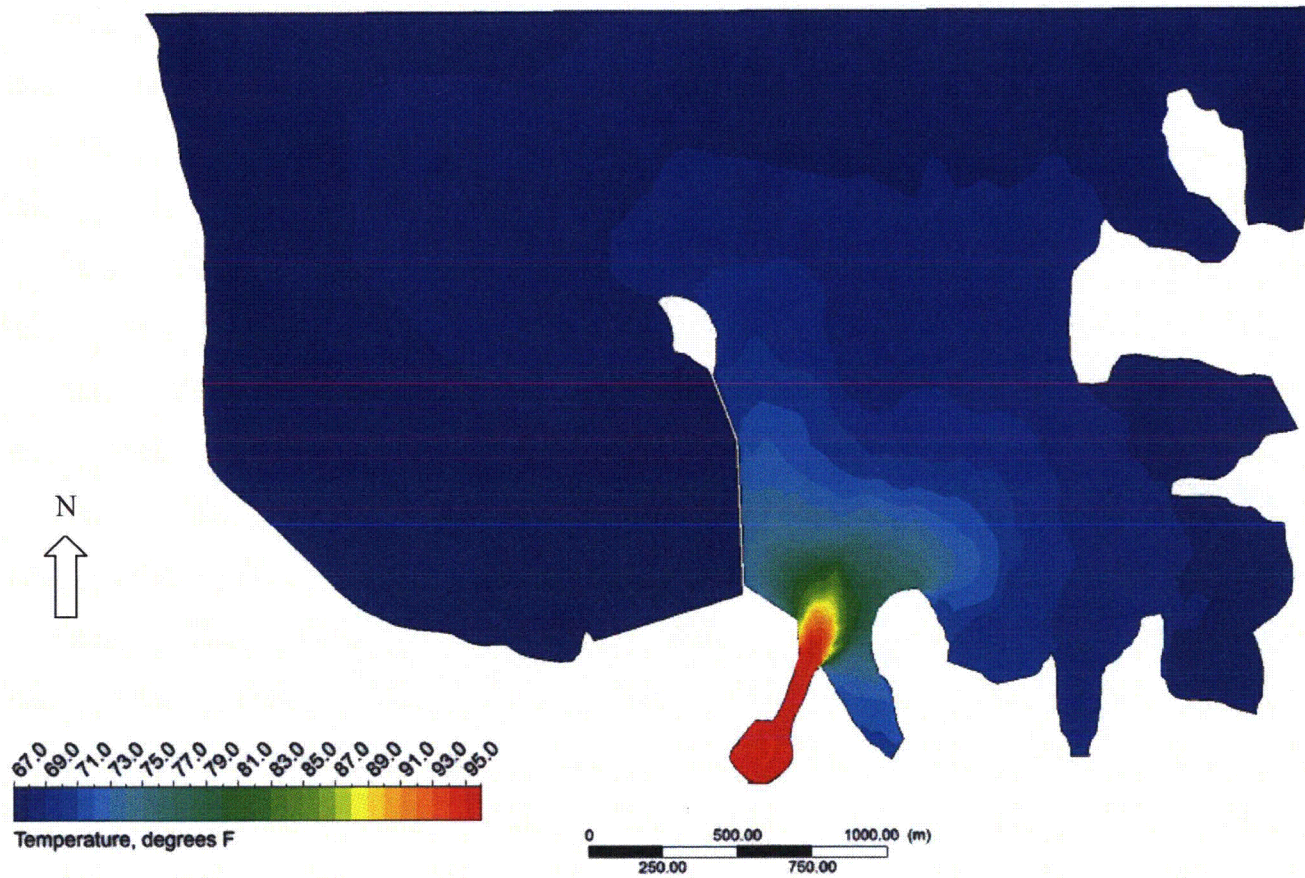


Figure 34 – Scenario 4W, surface temperature.

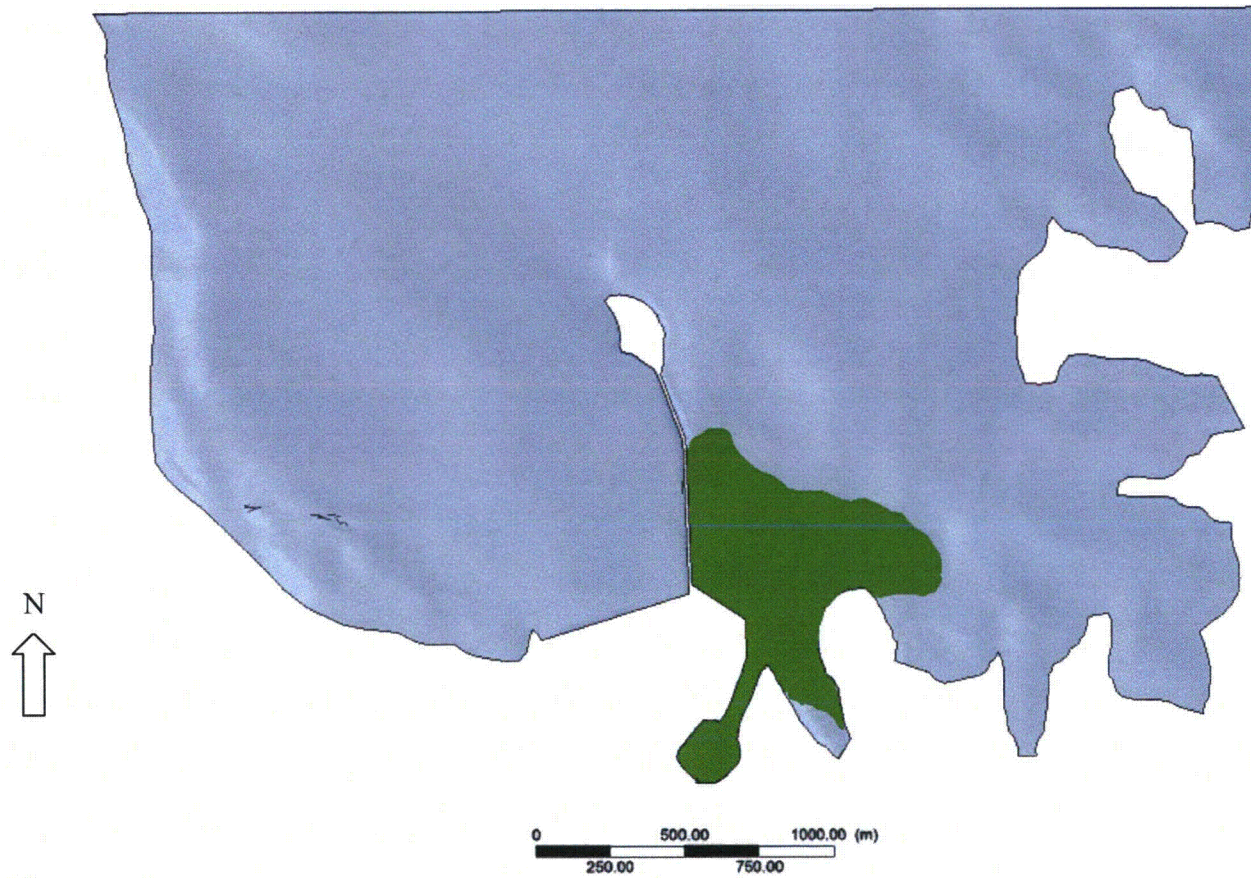


Figure 35 – Scenario 4W,  $\Delta T = 5^{\circ}\text{F}$  thermal plume (green).

## 12. APPENDIX A – DETAILS OF THE NUMERICAL MODEL

### Geometry and Mesh

The geometry and mesh generation were described in §2 of this report. A custom-built digitizer in Matlab was used to digitized the contour map, and produce a surface. This surface was read into the ICEM mesh generator to create the meshes.

### Boundary Conditions

The primary boundary condition in the CFD model was the flow rate and temperature applied discharge. In all simulations, a point source (or sink) was used to represent the flow being withdrawn through the cooling water intakes. Similarly, where the FPSF was operating, a mass and directional momentum point source was employed. The north surface of the domain was a zero-pressure “opening”. This allows fluid to flow into the domain through the north boundary without exerting unphysical influence on the flow. The bottom surface of the domain was set to a “wall” and the top surface, representing the water surface, was set to a “smooth wall” (i.e. no shear stress).

### Computational Models

#### **Thermodynamic**

The density of water in the domain depended on temperature only, using a tested polynomial relationship between density and temperature.

#### **Turbulence**

The shear-stress transport model (SST) was used for all simulations, which is a blend of the well-recognized  $k-\epsilon$  and  $k-\omega$  turbulence models.

### Numerics

#### **Model**

All simulations were performed using Ansys-CFX 12.0, a widely recognized industrial CFD software package. The model was run in steady-state mode as transient instabilities were not observed.



### **Discretization**

For the simulation, a specified blend factor of 0.5 was used, which is a blend between first- and second-order schemes. This scheme was used to provide a balance between numerical accuracy and stability.

The temporal term in the transient simulations was discretized using a second-order implicit Euler scheme.

### **Convergence**

The root-mean-square residuals were less than  $1e-04$  for all transport equations solved. This level of convergence is acceptable for a transient simulation, especially as the volume of the thermal plumes was not observed to change. Imbalances for all conserved variables were less than 1%.

**2010 Water Quality Monitoring Report  
For  
Monticello Reservoir**

**February 9, 2011**

**Environmental Services  
South Carolina Electric & Gas Company**

**Water Quality Monitoring**

## Monticello Reservoir 2010

### Introduction

Monticello Reservoir is the upper reservoir for a pumped storage hydroelectric plant (Fairfield Pumped Storage Facility) and the cooling reservoir for a nuclear powered electric generation facility (Virgil C. Summer Nuclear Station). Monticello Reservoir is located in Fairfield County, near Jenkinsville, South Carolina.

Water quality profiles (temperature, pH, conductivity, and dissolved oxygen) were conducted on a monthly basis at three locations in the Monticello Reservoir in 2010. Sampling was also conducted in the V. C. Summer Nuclear Station Service Water Pond. The locations are designated as follows (see Figure 1):

“Uplake 16”, located near the northern end of the reservoir (near the old NUS site 16),

“Intake 2”, located in the channel near the circulating water intake for the Virgil C. Summer Nuclear Station,

“Discharge 6”, located just outside the northern end of the circulating water discharge canal for the Virgil C. Summer Nuclear Station (VCSNS),

“Service Water Pond”, located adjacent to VCSNS. The actual sampling site is found in the immediate vicinity of the intake structure. **We no longer sample this area due to security concerns since 9/11.**

These three locations cover three major portions of the Monticello Reservoir. The three locations in the Monticello Reservoir are; the area near the Fairfield Pumped Storage Facility (FPSF) intake, which is influenced by pump back and generation operations of the hydro; the area near the discharge canal which is influenced by the VCSNS thermal discharge; and the northern end of the reservoir which is relatively unaffected, in terms of water quality, by either the FPSF or the VCSNS.

All measurements were conducted in the field using the YSI 650 MDS with the 600XL Sonde Water Quality Logger. The instruments (pH, Conductivity, and Dissolved Oxygen probes) were calibrated in the laboratory prior to taking field measurements. In some cases they were re-calibrated in the field. Data was collected between mid-morning or early afternoon on each sampling day.

## **Results**

Data collected is presented in the tables from January 2010 to December 2010. Bottom contours at each sampling location can vary greatly over small distances due to boat positioning not being exact. Depth sampled at a location can vary from month to month due to water use at Fairfield Pump Storage. Each table displays depth, temperature, pH, conductivity, and dissolved oxygen. Measurements were taken from surface (approximately one foot in depth), to the bottom in 1 meter increments. Six graphs are provided to show contrast or similarities of like parameters, different locations, and same dates. Conductivity was not included in the graphs. Results are discussed by parameter below. The months of January and August were graphed to show extremes in 2010 parameter values. All data from the month of June is incorrect due to an overheated Water Quality meter. June charts are not included in this report.

**Temperature-** As the result of heated water discharge from VCSNS, surface water temperatures were higher at the Discharge 6 site than at the other two locations in Lake Monticello (see temperature graph for August 2010). A thermal plume is evident in the Discharge 6 site at depths of 0 to 2 meters in August. In winter, Uplake 16 site and Intake 2 site have similar temperature profiles.

The May temperature graph shows a thermocline at Uplake 16 between 4 and 5 meters depth. Another thermocline is evident at Discharge 6 from 1 to 2 meters due to the thermal plume discharged from the V. C. Summer Nuclear Plant. A thermocline is a zone of rapid temperature change indicating a boundary between water layers of different temperature and density. This temperature change can be as little as 1 degree centigrade/meter of depth increase.

In the fall, due to cooler weather conditions, thermal stratification breaks down allowing mixing of layers. No thermocline is evident or expected during the winter months at Uplake 16 or Intake Channel 2 sampling sites. Discharge 6 has a thermocline at 1 to 2 meters due to the thermal plume discharged from the V. C. Summer Nuclear Plant during winter and summer months when Summer Station is operational.

**Dissolved Oxygen-** Dissolved oxygen in the Monticello Reservoir is relatively high throughout the year except for the deeper waters in the late summer. These deep waters, due to their lower temperatures and increased density, do not mix with the upper layers of water in the reservoir and become oxygen depleted during the summer. A general decrease in oxygen occurs with depth during the summer months as evidenced in two of the three sites sampled. During winter conditions, thorough mixing of water layers occur distributing oxygen from surface to bottom.

Uplake 16 site and Discharge 6 show the greatest decline in oxygen with depth in the summer months. There seems to be more mixing occurring at Intake 2 due to the influence of pump-back by FPSF.

**pH-** The pH in the Monticello Reservoir is generally neutral. Measured pH values in 2010 ranged from a low of 7.2 to a high of 8.7. During the winter months pH profiles are similar at all three sampling sites (see pH graph Monticello Reservoir January 2010). In the spring and summer, pH values are higher at the Uplake 16 site. This is due to phytoplankton photosynthetic activity in the surface waters to a depth that sunlight can penetrate. The uptake of carbon dioxide, and reduction of bicarbonate and carbonate ions during photosynthesis by aquatic plants (including microscopic phytoplankton) results in increased pH. The highest pH value of 8.7 was measured in Monticello Reservoir during 2010 near the surface at Uplake 16 during the month of May. The water mixing process previously mentioned at Intake 2, and Discharge 6, keeps their pH values lower than at the Uplake 16 site.

**Conductivity-** In 2010 normal conductivity in the Monticello Reservoir is 72.0 to 88.0 uS/cm. The conductivity is calibrated along with dissolved oxygen and pH before each monthly data collecting session. In general, low conductivity values are consistent for Monticello Reservoir and show only slight variation throughout the year.

### Summary

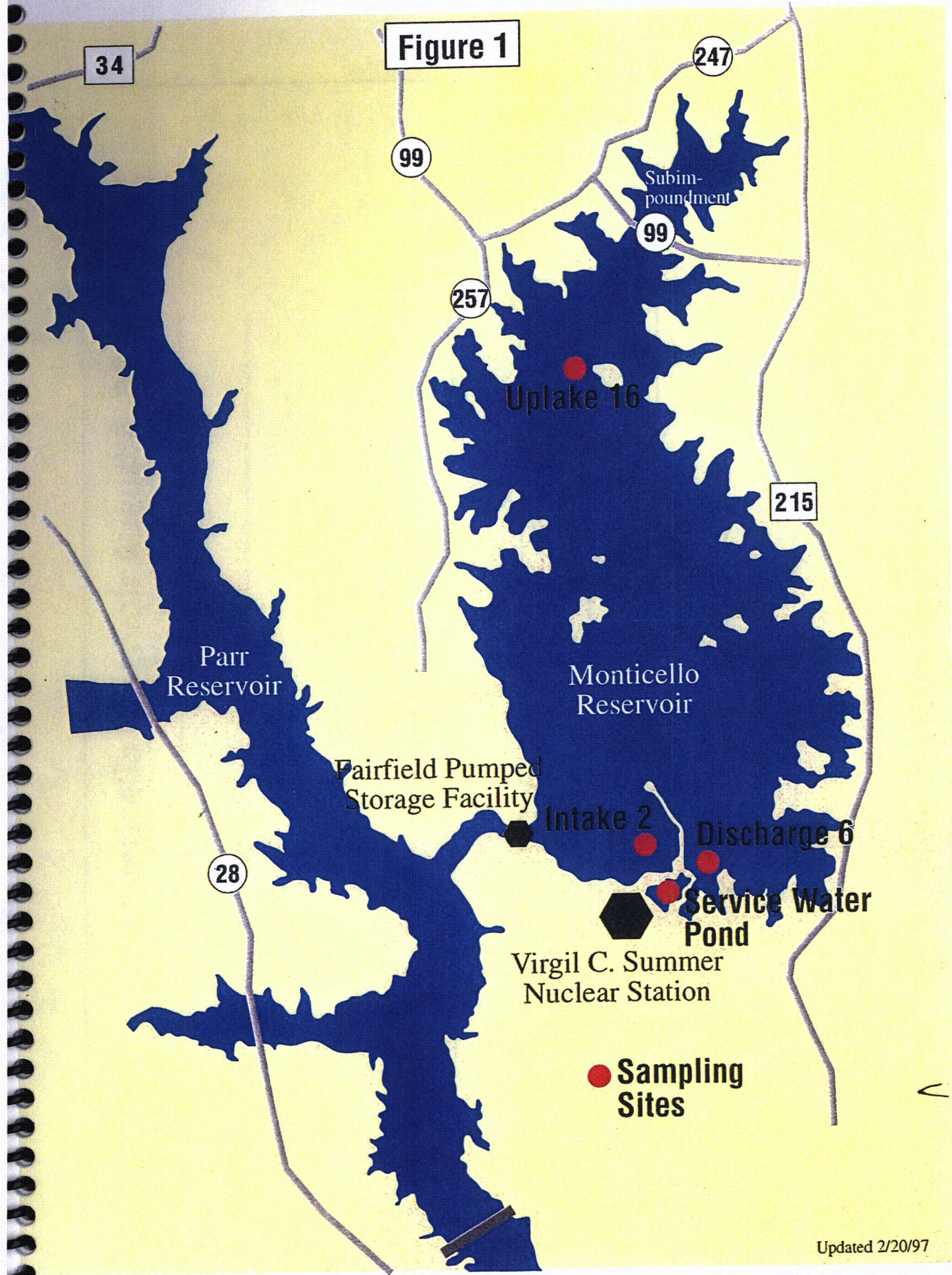
Water quality measurements reveal that Monticello Reservoir exhibits mixed thermal conditions at the southern end of the reservoir with the exception of the thermal plume from Summer Station (Discharge 6 location). There is no evidence of the thermal plume from Summer Station in the area near the Summer Station circulating water intake (Intake 2), nor at the uplake sampling location (Uplake 16). Water quality measurements reveal a thermally stratified environment at the uplake sampling location during warm weather months. Dissolved oxygen levels remain relatively high in Monticello Reservoir throughout the year except in deep water during the summer months. Near neutral pH conditions are the rule for Monticello Reservoir, except for photosynthesis induced pH elevation near the surface during the spring and summer months. Conductivity values are generally low and are consistent with historical Monticello Reservoir values. No data taken during 2010 suggests the water quality in Monticello Reservoir is insufficient for support of aquatic life.

Note: There is no data for the month of June 2010 due to meter malfunction from overheating.

F. David Haddon  
Environmental Services

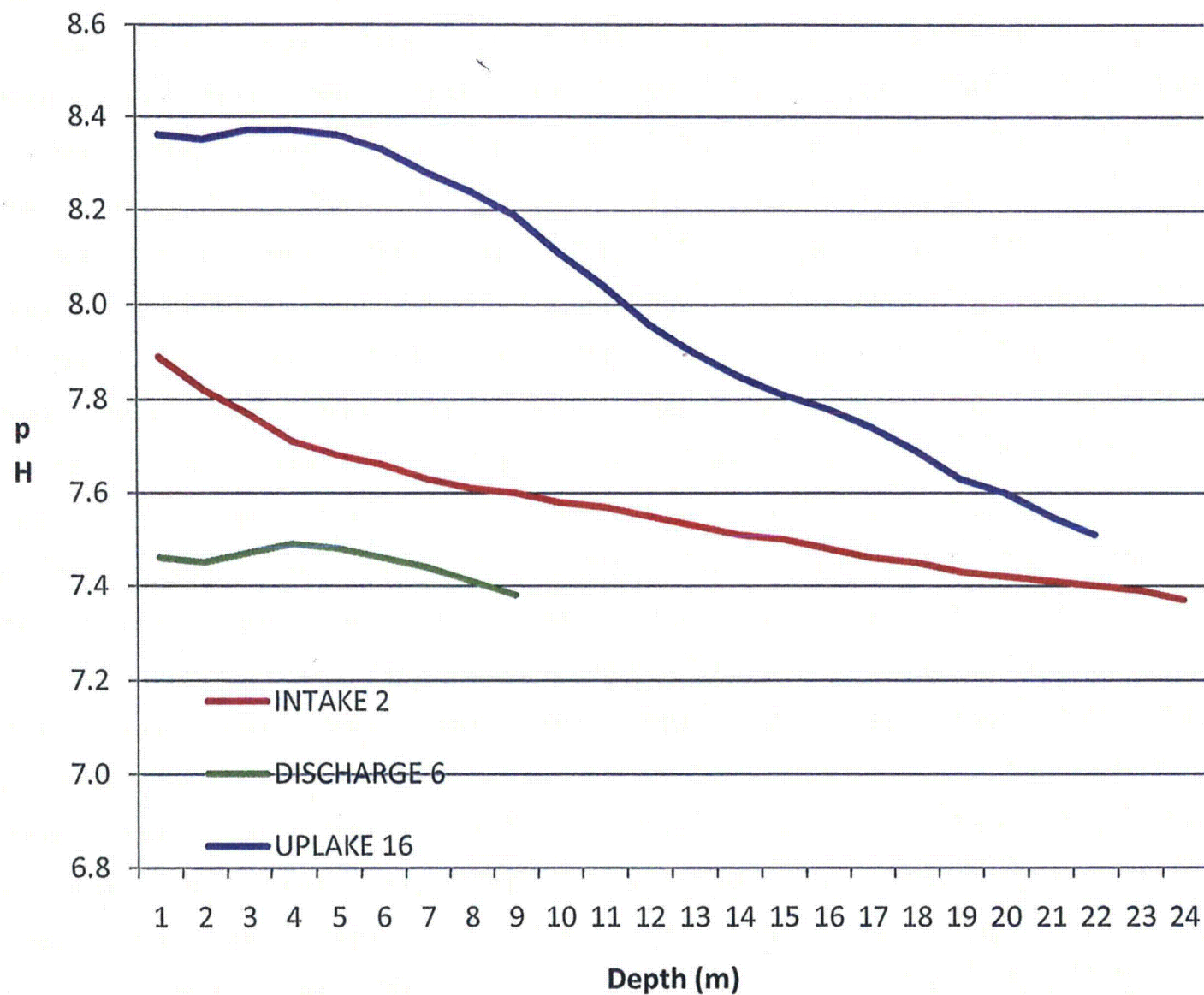


**Figure 1**



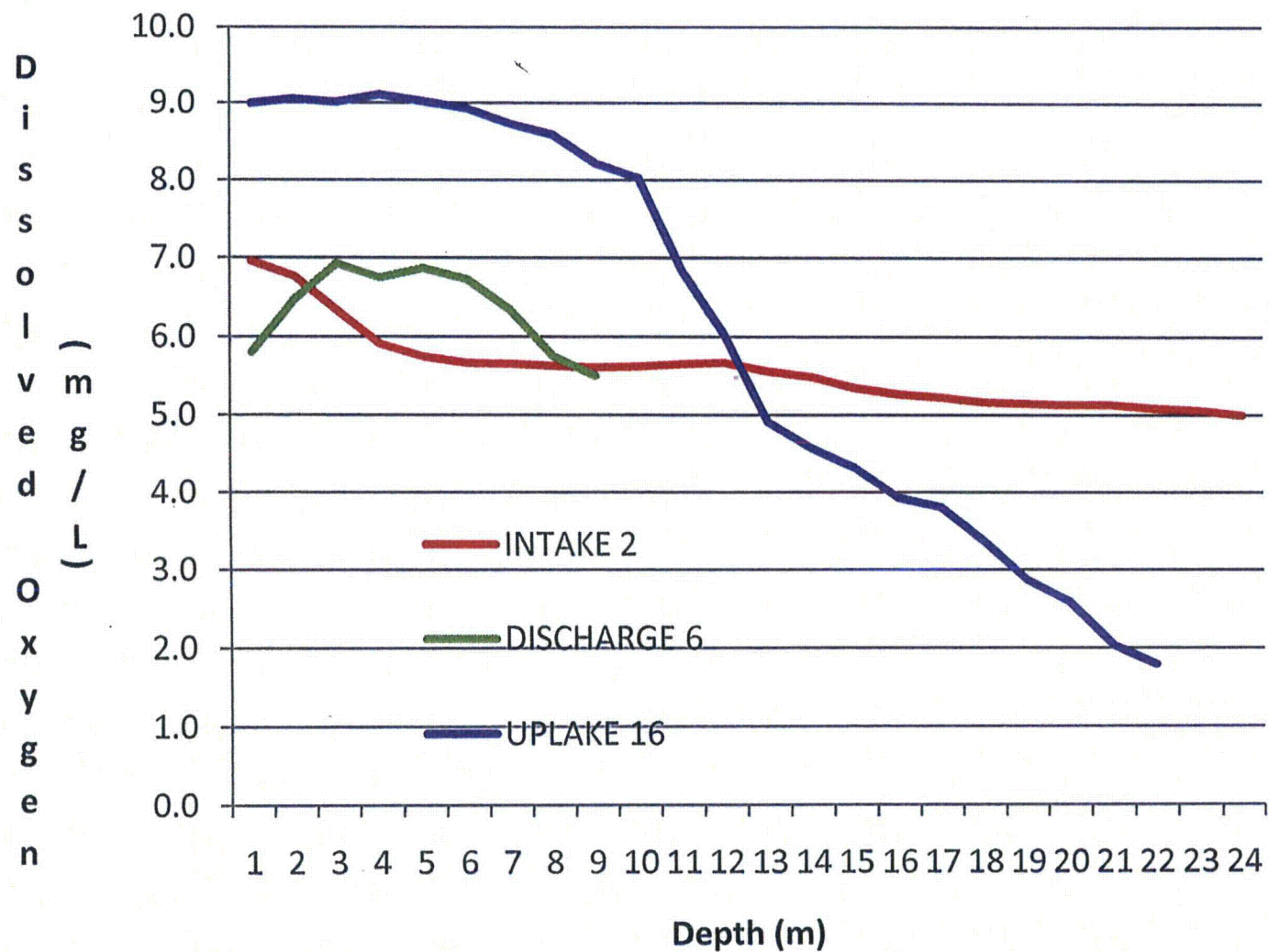


## pH Monticello Reservoir August 8, 2010



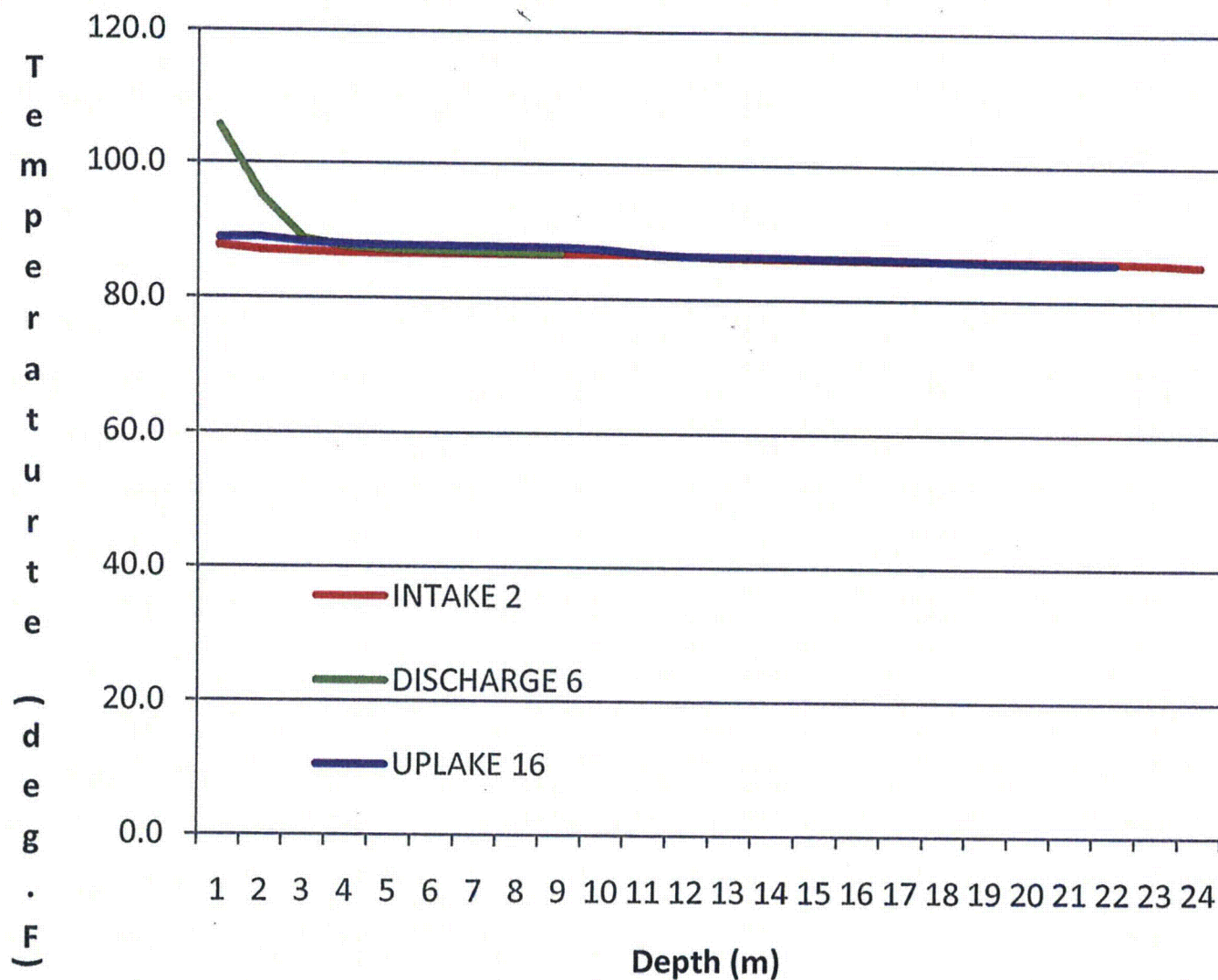


# Dissolved Oxygen Monticello Reservoir August 8, 2010

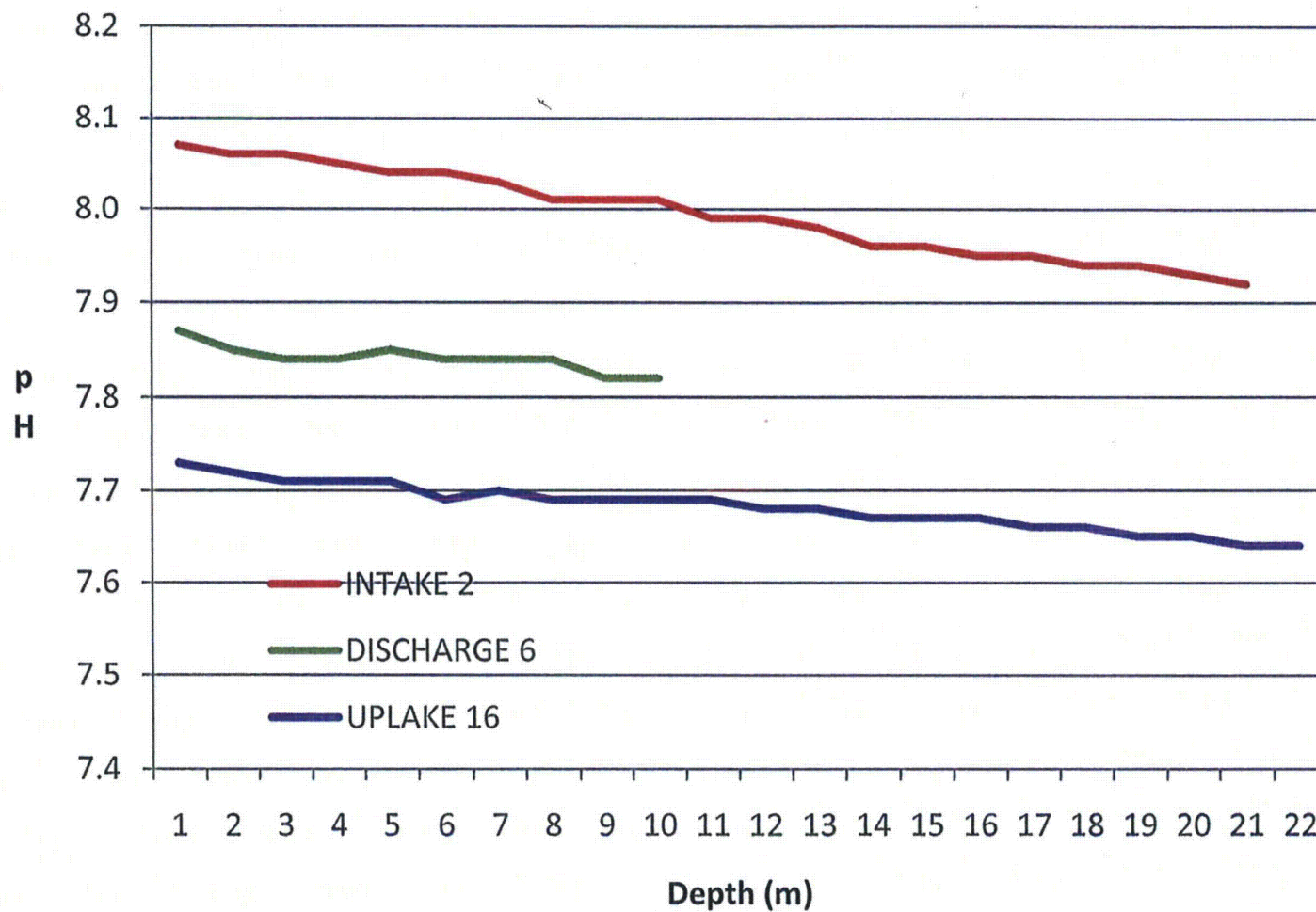


# Temperature Monticello Reservoir

## August 8, 2010



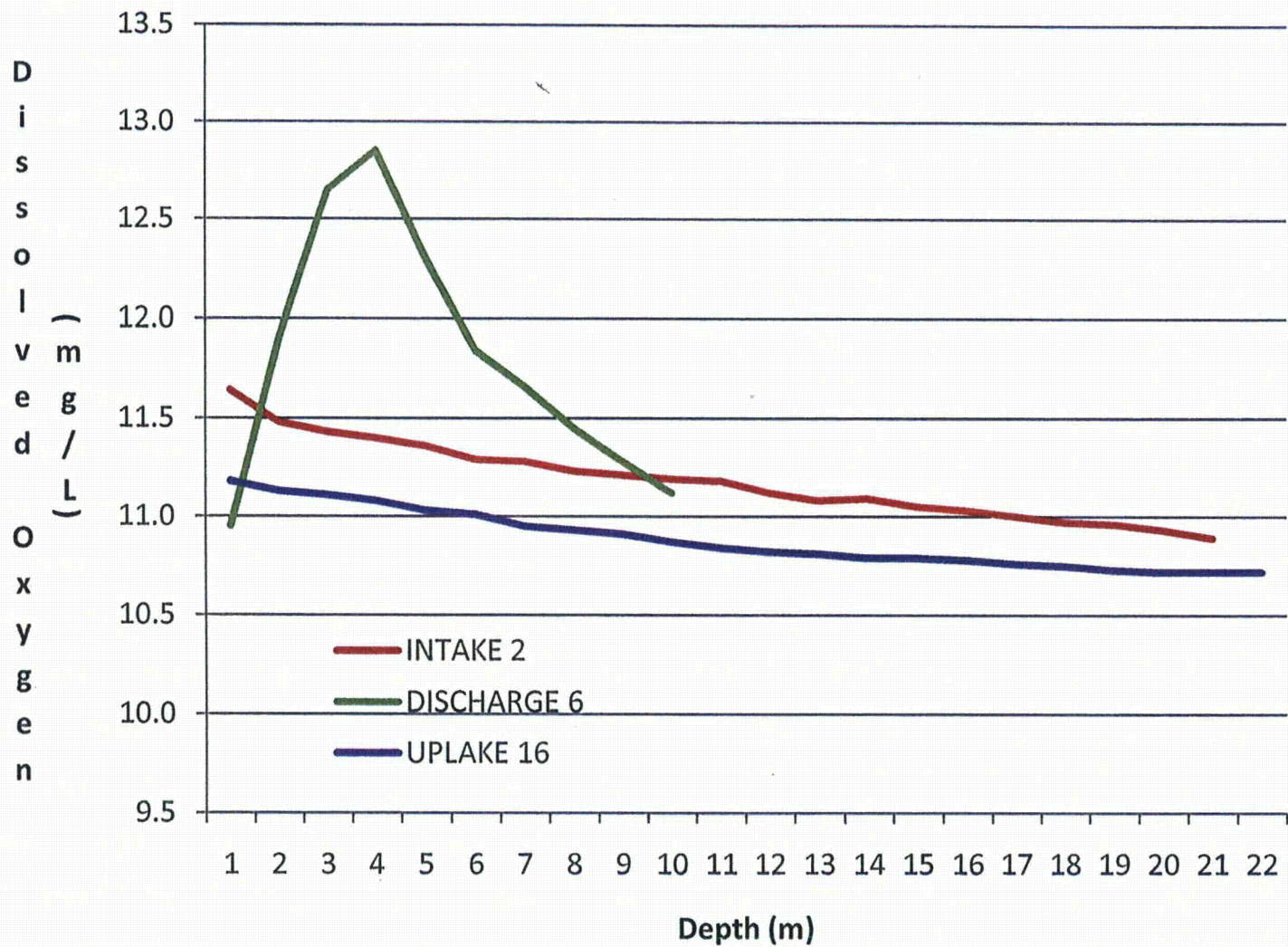
## pH Monticello Reservoir January 28, 2010





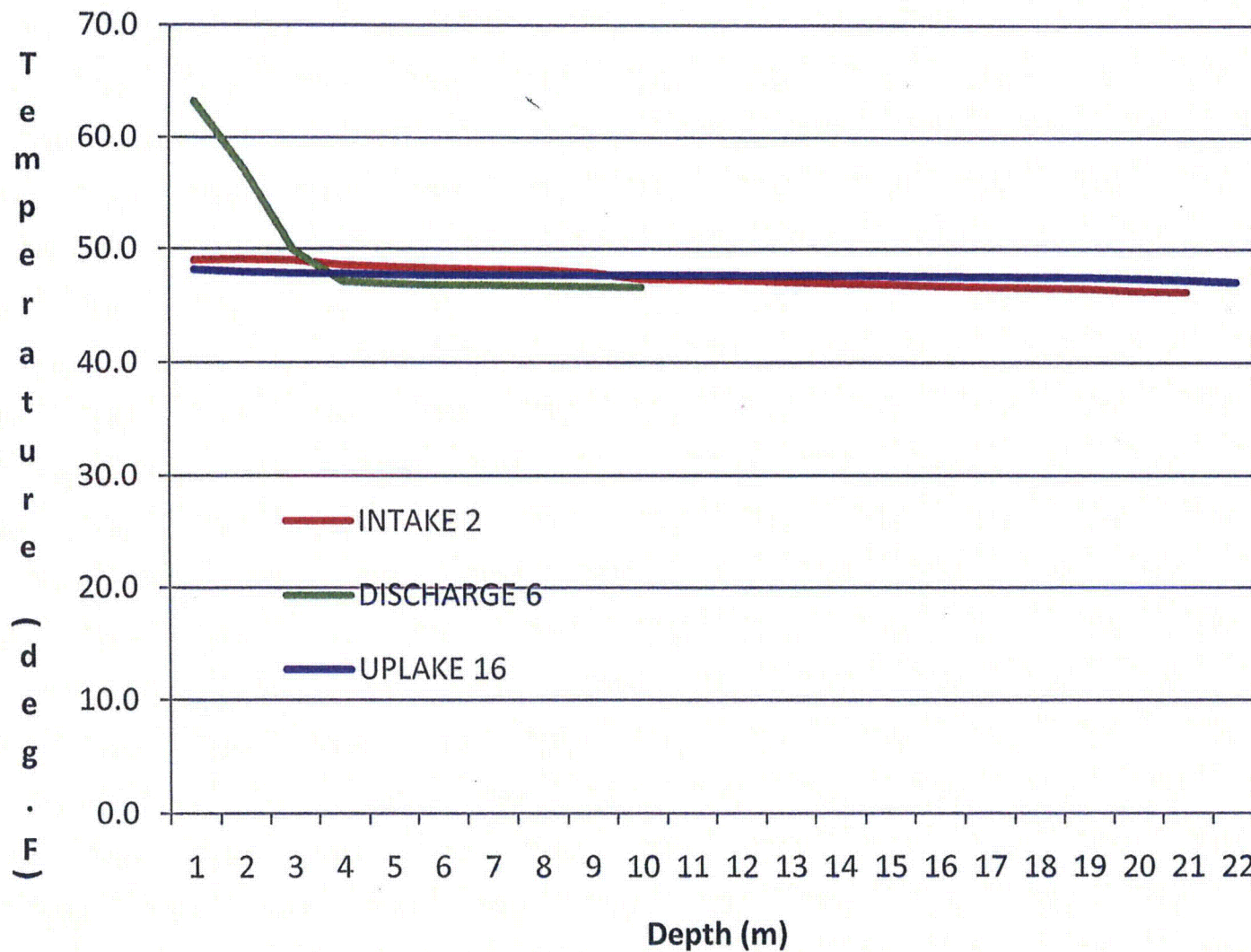
# Dissolved Oxygen Monticello Reservoir

## January 28, 2010



# Temperature Monticello Reservoir

## January 28, 2010



## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	1/28/2010 11:00	49.0	68	11.6	8.1	0
SITE: INTAKE CHANNEL 2	1/28/2010 11:00	49.1	64	11.5	8.1	1
SITE: INTAKE CHANNEL 2	1/28/2010 11:00	49.0	67	11.4	8.1	2
SITE: INTAKE CHANNEL 2	1/28/2010 11:00	48.6	63	11.4	8.1	3
SITE: INTAKE CHANNEL 2	1/28/2010 11:00	48.4	67	11.4	8.0	4
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	48.3	67	11.3	8.0	5
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	48.2	68	11.3	8.0	6
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	48.1	68	11.2	8.0	7
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.9	67	11.2	8.0	8
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.3	66	11.2	8.0	9
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.3	66	11.2	8.0	10
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.2	62	11.1	8.0	11
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.1	66	11.1	8.0	12
SITE: INTAKE CHANNEL 2	1/28/2010 11:01	47.0	67	11.1	8.0	13
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.9	63	11.1	8.0	14
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.7	64	11.0	8.0	15
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.7	67	11.0	8.0	16
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.6	68	11.0	7.9	17
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.5	67	11.0	7.9	18
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.3	64	10.9	7.9	19
SITE: INTAKE CHANNEL 2	1/28/2010 11:02	46.2	68	10.9	7.9	20



## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	1/28/2010 11:10	63.2	67	11.0	7.9	0
SITE: DISCHARGE 6	1/28/2010 11:10	57.1	69	11.9	7.9	1
SITE: DISCHARGE 6	1/28/2010 11:10	49.9	67	12.7	7.8	2
SITE: DISCHARGE 6	1/28/2010 11:10	47.1	68	12.9	7.8	3
SITE: DISCHARGE 6	1/28/2010 11:10	46.9	70	12.3	7.9	4
SITE: DISCHARGE 6	1/28/2010 11:10	46.8	68	11.8	7.8	5
SITE: DISCHARGE 6	1/28/2010 11:10	46.8	68	11.7	7.8	6
SITE: DISCHARGE 6	1/28/2010 11:10	46.8	68	11.5	7.8	7
SITE: DISCHARGE 6	1/28/2010 11:11	46.7	68	11.3	7.8	8
SITE: DISCHARGE 6	1/28/2010 11:11	46.6	68	11.1	7.8	9

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	1/28/2010 11:25	48.2	69	11.2	7.7	0
SITE: UPLAKE 16	1/28/2010 11:25	48.0	69	11.1	7.7	1
SITE: UPLAKE 16	1/28/2010 11:25	47.9	69	11.1	7.7	2
SITE: UPLAKE 16	1/28/2010 11:25	47.8	69	11.1	7.7	3
SITE: UPLAKE 16	1/28/2010 11:25	47.7	69	11.0	7.7	4
SITE: UPLAKE 16	1/28/2010 11:25	47.7	69	11.0	7.7	5
SITE: UPLAKE 16	1/28/2010 11:25	47.7	69	11.0	7.7	6
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SITE: UPLAKE 16	1/28/2010 11:25	47.7	69	10.9	7.7	8
SITE: UPLAKE 16	1/28/2010 11:26	47.7	69	10.9	7.7	9
SITE: UPLAKE 16	1/28/2010 11:26	47.7	69	10.8	7.7	10
SITE: UPLAKE 16	1/28/2010 11:26	47.7	69	10.8	7.7	11
SITE: UPLAKE 16	1/28/2010 11:26	47.6	69	10.8	7.7	12
SITE: UPLAKE 16	1/28/2010 11:26	47.6	74	10.8	7.7	13
SITE: UPLAKE 16	1/28/2010 11:26	47.6	69	10.8	7.7	14
SITE: UPLAKE 16	1/28/2010 11:26	47.6	69	10.8	7.7	15
SITE: UPLAKE 16	1/28/2010 11:26	47.6	69	10.8	7.7	16
SITE: UPLAKE 16	1/28/2010 11:27	47.5	69	10.8	7.7	17
SITE: UPLAKE 16	1/28/2010 11:27	47.5	69	10.7	7.7	18
SITE: UPLAKE 16	1/28/2010 11:27	47.4	69	10.7	7.7	19
SITE: UPLAKE 16	1/28/2010 11:27	47.3	69	10.7	7.6	20
SITE: UPLAKE 16	1/28/2010 11:27	47.1	69	10.7	7.6	21

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	2/23/2010 12:23	51.2	60	14.8	8.2	0
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	49.4	58	14.5	8.2	1
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	48.0	61	14.4	8.2	2
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	47.8	61	14.3	8.1	3
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	47.0	62	14.1	8.1	4
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	46.8	62	14.1	8.1	5
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	46.7	62	14.0	8.1	6
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	46.6	62	13.9	8.1	7
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	46.5	62	13.8	8.0	8
SITE: INTAKE CHANNEL 2	2/23/2010 12:24	46.5	62	13.7	8.0	9
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.4	62	13.7	8.0	10
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.4	62	13.6	8.0	11
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.4	62	13.5	8.0	12
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.4	62	13.5	8.0	13
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.3	62	13.5	8.0	14
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.2	62	13.5	8.0	15
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.2	62	13.4	8.0	16
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.2	62	13.4	7.9	17
SITE: INTAKE CHANNEL 2	2/23/2010 12:25	46.1	62	13.4	7.9	18
SITE: INTAKE CHANNEL 2	2/23/2010 12:26	46.0	62	13.4	7.9	19
SITE: INTAKE CHANNEL 2	2/23/2010 12:26	45.9	60	13.4	7.9	20
SITE: INTAKE CHANNEL 2	2/23/2010 12:26	45.6	61	13.4	7.9	21
SITE: INTAKE CHANNEL 2	2/23/2010 12:26	45.5	61	13.3	7.9	22

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	2/23/2010 12:35	60.0	62	13.9	7.9	0
SITE: DISCHARGE 6	2/23/2010 12:35	54.6	59	14.7	7.9	1
SITE: DISCHARGE 6	2/23/2010 12:35	47.4	61	15.4	7.9	2
SITE: DISCHARGE 6	2/23/2010 12:35	46.6	61	15.2	7.9	3
SITE: DISCHARGE 6	2/23/2010 12:35	46.0	62	14.5	7.9	4
SITE: DISCHARGE 6	2/23/2010 12:35	45.9	62	14.1	7.8	5
SITE: DISCHARGE 6	2/23/2010 12:36	45.9	61	13.9	7.8	6
SITE: DISCHARGE 6	2/23/2010 12:36	45.8	61	13.7	7.8	7
SITE: DISCHARGE 6	2/23/2010 12:36	45.8	61	13.5	7.8	8
SITE: DISCHARGE 6	2/23/2010 12:36	45.7	61	13.4	7.8	9

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	2/23/2010 12:52	54.2	62	14.3	8.0	0
SITE: UPLAKE 16	2/23/2010 12:52	54.4	61	14.2	8.0	1
SITE: UPLAKE 16	2/23/2010 12:52	53.7	61	14.3	8.0	2
SITE: UPLAKE 16	2/23/2010 12:52	52.7	59	14.3	8.0	3
SITE: UPLAKE 16	2/23/2010 12:53	48.3	61	14.7	8.0	4
SITE: UPLAKE 16	2/23/2010 12:53	48.0	62	14.6	8.0	5
SITE: UPLAKE 16	2/23/2010 12:53	47.4	62	14.3	7.9	6
SITE: UPLAKE 16	2/23/2010 12:53	46.8	62	14.0	7.9	7
SITE: UPLAKE 16	2/23/2010 12:53	46.5	62	14.0	7.9	8
SITE: UPLAKE 16	2/23/2010 12:53	46.3	62	13.9	7.9	9
SITE: UPLAKE 16	2/23/2010 12:53	46.1	62	13.7	7.9	10
SITE: UPLAKE 16	2/23/2010 12:53	46.0	62	13.6	7.9	11
SITE: UPLAKE 16	2/23/2010 12:54	45.9	62	13.5	7.9	12
SITE: UPLAKE 16	2/23/2010 12:54	45.8	63	13.4	7.8	13
SITE: UPLAKE 16	2/23/2010 12:54	45.8	63	13.3	7.8	14
SITE: UPLAKE 16	2/23/2010 12:54	45.7	63	13.3	7.8	15
SITE: UPLAKE 16	2/23/2010 12:54	45.7	63	13.2	7.8	16
SITE: UPLAKE 16	2/23/2010 12:54	45.6	63	13.2	7.8	17
SITE: UPLAKE 16	2/23/2010 12:54	45.6	63	13.1	7.8	18
SITE: UPLAKE 16	2/23/2010 12:54	45.6	62	13.1	7.8	19
SITE: UPLAKE 16	2/23/2010 12:54	45.6	63	13.1	7.8	20
SITE: UPLAKE 16	2/23/2010 12:54	45.5	63	13.1	7.8	21

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	54.9	58	12.6	8.0	0
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	54.9	58	12.3	8.0	1
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	54.7	58	12.2	8.0	2
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	54.7	58	12.1	8.0	3
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	54.7	58	12.0	8.0	4
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	52.8	57	12.4	8.0	5
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	51.6	57	12.4	7.9	6
SITE: INTAKE CHANNEL 2	3/18/2010 21:00	50.8	57	12.5	7.9	7
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	50.3	57	12.4	7.9	8
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	49.5	57	12.4	7.9	9
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	48.9	58	12.4	7.9	10
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	48.5	58	12.4	7.9	11
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	48.1	58	12.3	7.9	12
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	48.0	58	12.2	7.9	13
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	47.9	58	12.2	7.9	14
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	47.8	58	12.1	7.9	15
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	47.6	58	12.0	7.9	16
SITE: INTAKE CHANNEL 2	3/18/2010 21:01	47.6	58	12.0	7.9	17
SITE: INTAKE CHANNEL 2	3/18/2010 21:02	47.5	58	11.9	7.8	18
SITE: INTAKE CHANNEL 2	3/18/2010 21:02	47.4	58	11.8	7.8	19



## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	3/18/2010 21:08	68.3	58	11.6	7.8	0
SITE: DISCHARGE 6	3/18/2010 21:08	63.9	58	11.7	7.8	1
SITE: DISCHARGE 6	3/18/2010 21:09	56.0	57	12.9	7.8	2
SITE: DISCHARGE 6	3/18/2010 21:09	53.3	58	13.0	7.8	3
SITE: DISCHARGE 6	3/18/2010 21:09	52.8	58	12.7	7.8	4
SITE: DISCHARGE 6	3/18/2010 21:09	52.6	58	12.5	7.8	5
SITE: DISCHARGE 6	3/18/2010 21:09	52.4	58	12.3	7.8	6
SITE: DISCHARGE 6	3/18/2010 21:09	52.0	58	12.2	7.8	7
SITE: DISCHARGE 6	3/18/2010 21:09	51.6	58	12.1	7.8	8
SITE: DISCHARGE 6	3/18/2010 21:09	51.3	58	12.1	7.8	9

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	3/18/2010 21:24	55.4	58	16.8	7.7	0
SITE: UPLAKE 16	3/18/2010 21:24	55.1	58	12.4	7.7	1
SITE: UPLAKE 16	3/18/2010 21:24	55.0	58	12.3	7.7	2
SITE: UPLAKE 16	3/18/2010 21:24	54.6	58	12.2	7.7	3
SITE: UPLAKE 16	3/18/2010 21:25	53.7	58	12.1	7.7	4
SITE: UPLAKE 16	3/18/2010 21:25	53.1	58	12.2	7.7	5
SITE: UPLAKE 16	3/18/2010 21:25	52.7	58	12.2	7.7	6
SITE: UPLAKE 16	3/18/2010 21:25	52.2	58	12.2	7.7	7
SITE: UPLAKE 16	3/18/2010 21:25	51.9	58	12.2	7.7	8
SITE: UPLAKE 16	3/18/2010 21:25	51.4	58	12.2	7.7	9
SITE: UPLAKE 16	3/18/2010 21:25	51.0	58	12.2	7.7	10
SITE: UPLAKE 16	3/18/2010 21:25	50.6	58	12.2	7.7	11
SITE: UPLAKE 16	3/18/2010 21:25	50.2	58	12.2	7.7	12
SITE: UPLAKE 16	3/18/2010 21:25	49.9	58	12.1	7.7	13
SITE: UPLAKE 16	3/18/2010 21:26	48.9	58	12.2	7.7	14
SITE: UPLAKE 16	3/18/2010 21:26	48.1	58	12.3	7.7	15
SITE: UPLAKE 16	3/18/2010 21:26	47.8	58	12.2	7.7	16
SITE: UPLAKE 16	3/18/2010 21:26	47.5	59	12.2	7.7	17
SITE: UPLAKE 16	3/18/2010 21:26	47.4	59	12.1	7.7	18
SITE: UPLAKE 16	3/18/2010 21:26	47.3	59	12.1	7.6	19
SITE: UPLAKE 16	3/18/2010 21:26	47.2	59	12.0	7.6	20
SITE: UPLAKE 16	3/18/2010 21:26	47.1	59	11.9	7.6	21

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	4/29/2010 10:25	67.5	69	9.6	8.3	0
SITE: INTAKE CHANNEL 2	4/29/2010 10:26	67.0	69	9.7	8.3	1
SITE: INTAKE CHANNEL 2	4/29/2010 10:26	66.8	69	9.7	8.3	2
SITE: INTAKE CHANNEL 2	4/29/2010 10:26	66.4	69	9.7	8.3	3
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	66.2	73	9.3	8.2	4
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	66.0	69	9.2	8.1	5
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	66.0	69	9.2	8.1	6
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	65.9	69	9.1	8.1	7
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	65.9	69	9.1	8.1	8
SITE: INTAKE CHANNEL 2	4/29/2010 10:27	65.8	69	9.1	8.0	9
SITE: INTAKE CHANNEL 2	4/29/2010 10:28	65.5	69	9.0	8.0	10
SITE: INTAKE CHANNEL 2	4/29/2010 10:28	65.1	73	8.8	8.0	11
SITE: INTAKE CHANNEL 2	4/29/2010 10:28	64.8	69	8.8	8.0	12
SITE: INTAKE CHANNEL 2	4/29/2010 10:28	64.1	68	8.8	7.9	13
SITE: INTAKE CHANNEL 2	4/29/2010 10:28	62.7	68	8.8	7.9	14
SITE: INTAKE CHANNEL 2	4/29/2010 10:29	61.6	68	8.8	7.9	15
SITE: INTAKE CHANNEL 2	4/29/2010 10:29	61.0	68	8.6	7.9	16
SITE: INTAKE CHANNEL 2	4/29/2010 10:29	60.6	68	8.4	7.9	17
SITE: INTAKE CHANNEL 2	4/29/2010 10:29	60.2	68	8.3	7.8	18
SITE: INTAKE CHANNEL 2	4/29/2010 10:29	60.0	68	8.3	7.8	19
SITE: INTAKE CHANNEL 2	4/29/2010 10:30	59.5	69	8.0	7.8	20

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	4/29/2010 10:38	84.4	71	8.5	7.8	0
SITE: DISCHARGE 6	4/29/2010 10:38	75.1	69	9.6	7.8	1
SITE: DISCHARGE 6	4/29/2010 10:38	71.6	67	9.8	7.9	2
SITE: DISCHARGE 6	4/29/2010 10:38	69.5	68	9.9	7.9	3
SITE: DISCHARGE 6	4/29/2010 10:39	68.7	68	9.9	7.9	4
SITE: DISCHARGE 6	4/29/2010 10:39	68.0	68	9.9	7.9	5
SITE: DISCHARGE 6	4/29/2010 10:39	67.1	70	9.6	7.9	6
SITE: DISCHARGE 6	4/29/2010 10:39	66.5	69	9.5	7.9	7
SITE: DISCHARGE 6	4/29/2010 10:39	65.8	69	9.3	7.9	8

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	4/29/2010 10:56	69	68	12.13	8.1	0
SITE: UPLAKE 16	4/29/2010 10:56	69	67	9.71	8.1	1
SITE: UPLAKE 16	4/29/2010 10:56	68	67	9.7	8.1	2
SITE: UPLAKE 16	4/29/2010 10:56	68	67	9.66	8.1	3
SITE: UPLAKE 16	4/29/2010 10:57	68	68	9.65	8.1	4
SITE: UPLAKE 16	4/29/2010 10:57	67	68	9.64	8.1	5
SITE: UPLAKE 16	4/29/2010 10:57	67	68	9.58	8.1	6
SITE: UPLAKE 16	4/29/2010 10:57	67	68	9.58	8.1	7
SITE: UPLAKE 16	4/29/2010 10:57	67	68	9.49	8.0	8
SITE: UPLAKE 16	4/29/2010 10:57	66	64	9.25	8.0	9
SITE: UPLAKE 16	4/29/2010 10:57	65	69	9.07	8.0	10
SITE: UPLAKE 16	4/29/2010 10:58	65	65	8.36	7.9	10
SITE: UPLAKE 16	4/29/2010 10:58	64	65	8.24	7.9	11
SITE: UPLAKE 16	4/29/2010 10:58	63	69	8.02	7.9	12
SITE: UPLAKE 16	4/29/2010 10:58	63	68	7.91	7.8	13
SITE: UPLAKE 16	4/29/2010 10:58	63	65	7.79	7.8	14
SITE: UPLAKE 16	4/29/2010 10:58	62	68	7.76	7.8	15
SITE: UPLAKE 16	4/29/2010 10:59	62	68	7.67	7.8	16
SITE: UPLAKE 16	4/29/2010 10:59	61	65	7.57	7.7	17
SITE: UPLAKE 16	4/29/2010 10:59	61	68	7.51	7.7	18
SITE: UPLAKE 16	4/29/2010 10:59	61	68	7.35	7.7	19
SITE: UPLAKE 16	4/29/2010 10:59	60	68	7.32	7.7	20
SITE: UPLAKE 16	4/29/2010 10:59	59	68	7.27	7.7	21
SITE: UPLAKE 16	4/29/2010 10:59	58	67	7.03	7.7	22

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	5/19/2010 9:57	74.5	72	9.0	8.1	0
SITE: INTAKE CHANNEL 2	5/19/2010 9:57	74.4	72	8.8	8.1	1
SITE: INTAKE CHANNEL 2	5/19/2010 9:57	74.0	72	8.6	8.1	2
SITE: INTAKE CHANNEL 2	5/19/2010 9:57	73.5	69	8.3	8.0	3
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	73.4	72	8.3	8.0	4
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	73.4	72	8.2	8.0	5
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	73.1	72	8.1	7.9	6
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	72.4	72	8.1	7.9	7
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	71.9	73	8.0	7.9	8
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	71.7	73	7.9	7.9	9
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	71.6	73	7.8	7.9	10
SITE: INTAKE CHANNEL 2	5/19/2010 9:58	70.7	72	7.7	7.8	11
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	70.0	72	7.7	7.8	12
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	69.3	72	7.6	7.8	13
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	68.9	71	7.5	7.8	14
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	68.2	71	7.3	7.8	15
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	67.8	67	7.3	7.7	16
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	67.2	70	7.2	7.7	17
SITE: INTAKE CHANNEL 2	5/19/2010 9:59	66.4	71	7.2	7.7	18
SITE: INTAKE CHANNEL 2	5/19/2010 10:00	66.1	71	7.1	7.7	19
SITE: INTAKE CHANNEL 2	5/19/2010 10:00	65.9	71	7.0	7.7	20
SITE: INTAKE CHANNEL 2	5/19/2010 10:00	64.4	69	7.1	7.7	21
SITE: INTAKE CHANNEL 2	5/19/2010 10:00	62.9	71	6.6	7.7	22



2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	5/19/2010 10:08	88.2	73	7.8	8.0	0
SITE: DISCHARGE 6	5/19/2010 10:08	83.2	72	8.2	7.9	1
SITE: DISCHARGE 6	5/19/2010 10:08	78.0	70	8.6	8.0	2
SITE: DISCHARGE 6	5/19/2010 10:08	77.0	71	8.8	8.0	3
SITE: DISCHARGE 6	5/19/2010 10:08	76.6	71	8.9	8.0	4
SITE: DISCHARGE 6	5/19/2010 10:08	75.7	71	8.9	8.0	5
SITE: DISCHARGE 6	5/19/2010 10:08	74.9	70	8.9	8.0	6
SITE: DISCHARGE 6	5/19/2010 10:08	73.6	70	8.9	8.0	7
SITE: DISCHARGE 6	5/19/2010 10:09	71.8	71	8.8	7.9	8
SITE: DISCHARGE 6	5/19/2010 10:09	70.6	71	8.0	7.9	9
SITE: DISCHARGE 6	5/19/2010 10:09	70.3	71	7.9	7.9	10
SITE: DISCHARGE 6	5/19/2010 10:09	70.1	71	7.5	7.9	11
SITE: DISCHARGE 6	5/19/2010 10:09	69.8	71	7.3	7.8	12

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	5/19/2010 10:24	77.9	71	9.4	8.6	0
SITE: UPLAKE 16	5/19/2010 10:24	78.0	71	9.4	8.7	1
SITE: UPLAKE 16	5/19/2010 10:24	78.0	75	9.5	8.7	2
SITE: UPLAKE 16	5/19/2010 10:24	78.0	71	9.5	8.7	3
SITE: UPLAKE 16	5/19/2010 10:25	78.0	70	9.5	8.7	4
SITE: UPLAKE 16	5/19/2010 10:25	75.9	69	9.8	8.7	5
SITE: UPLAKE 16	5/19/2010 10:25	74.6	69	9.8	8.6	6
SITE: UPLAKE 16	5/19/2010 10:25	72.5	70	9.1	8.5	7
SITE: UPLAKE 16	5/19/2010 10:25	71.7	71	8.6	8.4	8
SITE: UPLAKE 16	5/19/2010 10:25	70.9	71	8.3	8.3	9
SITE: UPLAKE 16	5/19/2010 10:25	70.5	71	8.0	8.3	10
SITE: UPLAKE 16	5/19/2010 10:26	69.8	71	7.6	8.2	11
SITE: UPLAKE 16	5/19/2010 10:26	69.4	71	7.5	8.2	12
SITE: UPLAKE 16	5/19/2010 10:26	69.2	75	7.2	8.1	13
SITE: UPLAKE 16	5/19/2010 10:26	68.9	71	7.1	8.1	14
SITE: UPLAKE 16	5/19/2010 10:26	68.4	71	7.0	8.0	15
SITE: UPLAKE 16	5/19/2010 10:26	67.8	70	6.8	8.0	16
SITE: UPLAKE 16	5/19/2010 10:27	67.2	71	6.5	7.9	17

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	6/24/2010 13:56	86.8	73	15.6	8.5	0
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	86.5	76	15.7	8.4	1
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	86.2	73	16.3	8.3	2
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	85.7	74	15.4	8.2	3
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	85.1	75	15.1	8.1	4
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	84.5	75	14.9	8.1	5
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	83.8	74	14.6	8.0	6
SITE: INTAKE CHANNEL 2	6/24/2010 13:57	83.2	77	14.6	7.9	7
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	83.0	73	14.9	7.9	8
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	82.5	73	15.7	7.9	9
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	82.1	73	15.7	7.8	10
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	81.2	74	11.7	7.8	11
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	80.4	72	9.0	7.8	12
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	80.1	72	8.9	7.7	13
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	79.8	72	8.7	7.7	14
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	79.6	72	8.2	7.7	15
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	79.2	72	8.1	7.7	16
SITE: INTAKE CHANNEL 2	6/24/2010 13:58	78.9	72	7.6	7.6	17
SITE: INTAKE CHANNEL 2	6/24/2010 13:59	78.4	72	7.5	7.6	18
SITE: INTAKE CHANNEL 2	6/24/2010 13:59	78.2	72	7.2	7.6	19
SITE: INTAKE CHANNEL 2	6/24/2010 13:59	77.5	74	7.0	7.6	20
SITE: INTAKE CHANNEL 2	6/24/2010 13:59	76.8	72	6.7	7.5	21
SITE: INTAKE CHANNEL 2	6/24/2010 13:59	76.4	72	6.7	7.5	22

Note: Data bad due to over heated  
Water Quality meter.

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	6/24/2010 14:07	100.1	75	12.0	7.8	0
SITE: DISCHARGE 6	6/24/2010 14:07	91.2	72	7.6	7.8	1
SITE: DISCHARGE 6	6/24/2010 14:07	87.3	70	8.1	7.9	2
SITE: DISCHARGE 6	6/24/2010 14:07	86.0	71	8.5	7.9	3
SITE: DISCHARGE 6	6/24/2010 14:07	83.7	72	9.0	7.9	4
SITE: DISCHARGE 6	6/24/2010 14:07	83.0	72	8.9	7.9	5
SITE: DISCHARGE 6	6/24/2010 14:08	82.6	72	8.2	7.8	6
SITE: DISCHARGE 6	6/24/2010 14:08	82.3	72	7.8	7.8	7
SITE: DISCHARGE 6	6/24/2010 14:08	82.0	72	7.6	7.7	8
SITE: DISCHARGE 6	6/24/2010 14:08	81.7	72	7.2	7.7	9
SITE: DISCHARGE 6	6/24/2010 14:08	81.5	72	7.0	7.7	10

Note: Data bad due To over heated  
water quality meter

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	6/24/2010 14:21	93.0	81	8.1	7.7	0
SITE: UPLAKE 16	6/24/2010 14:21	90.2	73	8.6	8.5	1
SITE: UPLAKE 16	6/24/2010 14:21	89.8	73	9.7	8.6	2
SITE: UPLAKE 16	6/24/2010 14:21	89.3	72	10.2	8.6	3
SITE: UPLAKE 16	6/24/2010 14:21	85.8	70	10.8	8.6	4
SITE: UPLAKE 16	6/24/2010 14:21	83.5	71	10.8	8.5	5
SITE: UPLAKE 16	6/24/2010 14:22	82.5	72	10.2	8.3	6
SITE: UPLAKE 16	6/24/2010 14:22	81.8	72	8.5	8.2	7
SITE: UPLAKE 16	6/24/2010 14:22	81.5	72	7.4	8.1	8
SITE: UPLAKE 16	6/24/2010 14:22	81.3	72	7.0	8.0	9
SITE: UPLAKE 16	6/24/2010 14:22	80.9	72	6.6	8.0	10
SITE: UPLAKE 16	6/24/2010 14:22	80.6	72	6.4	7.9	11
SITE: UPLAKE 16	6/24/2010 14:22	80.4	72	6.0	7.9	12
SITE: UPLAKE 16	6/24/2010 14:22	80.2	72	5.7	7.8	13
SITE: UPLAKE 16	6/24/2010 14:22	80.0	72	5.5	7.8	14
SITE: UPLAKE 16	6/24/2010 14:22	79.9	72	5.2	7.8	15
SITE: UPLAKE 16	6/24/2010 14:23	79.5	72	4.9	7.7	16
SITE: UPLAKE 16	6/24/2010 14:23	79.4	71	4.8	7.7	17
SITE: UPLAKE 16	6/24/2010 14:23	79.1	72	4.4	7.6	18
SITE: UPLAKE 16	6/24/2010 14:23	78.9	72	4.3	7.6	19
SITE: UPLAKE 16	6/24/2010 14:23	78.7	72	4.2	7.6	20
SITE: UPLAKE 16	6/24/2010 14:23	78.2	72	4.0	7.6	21
SITE: UPLAKE 16	6/24/2010 14:23	77.0	73	3.4	7.5	22
SITE: UPLAKE 16	6/24/2010 14:23	76.5	75	2.8	7.5	23

Note: Data bad due to over heated water quality meter

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	7/19/2010 9:24	84.7	81	7.0	7.9	0
SITE: INTAKE CHANNEL 2	7/19/2010 9:25	84.6	80	6.7	7.8	1
SITE: INTAKE CHANNEL 2	7/19/2010 9:25	84.6	80	6.5	7.7	2
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.5	80	6.4	7.7	3
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.5	83	6.3	7.6	4
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.6	79	6.3	7.6	5
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.5	83	6.3	7.6	6
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.4	79	6.3	7.6	7
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.3	79	6.1	7.5	8
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.2	79	6.0	7.5	9
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.2	79	5.9	7.5	10
SITE: INTAKE CHANNEL 2	7/19/2010 9:26	84.2	79	5.9	7.5	11
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.2	82	5.8	7.5	12
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.2	79	5.8	7.5	13
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.2	82	5.7	7.5	14
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.2	78	5.7	7.5	15
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.2	78	5.7	7.5	16
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.1	78	5.6	7.4	17
SITE: INTAKE CHANNEL 2	7/19/2010 9:27	84.1	78	5.6	7.4	18
SITE: INTAKE CHANNEL 2	7/19/2010 9:28	84.1	78	5.6	7.4	19



## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	7/19/2010 9:35	99.1	80	5.1	7.4	0
SITE: DISCHARGE 6	7/19/2010 9:35	89.4	79	5.6	7.4	1
SITE: DISCHARGE 6	7/19/2010 9:35	86.6	77	5.8	7.4	2
SITE: DISCHARGE 6	7/19/2010 9:35	85.0	78	5.9	7.4	3
SITE: DISCHARGE 6	7/19/2010 9:35	84.4	78	5.3	7.4	4
SITE: DISCHARGE 6	7/19/2010 9:36	84.3	78	4.8	7.3	5
SITE: DISCHARGE 6	7/19/2010 9:36	84.3	78	4.7	7.3	6
SITE: DISCHARGE 6	7/19/2010 9:36	84.2	78	4.5	7.3	7
SITE: DISCHARGE 6	7/19/2010 9:36	84.1	78	4.3	7.3	8
SITE: DISCHARGE 6	7/19/2010 9:36	83.9	78	4.2	7.3	9
SITE: DISCHARGE 6	7/19/2010 9:36	83.9	78	4.0	7.2	10
SITE: DISCHARGE 6	7/19/2010 9:36	83.9	78	3.9	7.2	11

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	7/19/2010 10:11	86.0	74	8.8	8.1	0
SITE: UPLAKE 16	7/19/2010 10:11	86.0	77	8.5	8.2	1
SITE: UPLAKE 16	7/19/2010 10:12	86.0	77	8.4	8.2	2
SITE: UPLAKE 16	7/19/2010 10:12	86.0	74	8.4	8.2	3
SITE: UPLAKE 16	7/19/2010 10:12	86.0	74	8.3	8.3	4
SITE: UPLAKE 16	7/19/2010 10:12	86.0	77	8.3	8.3	5
SITE: UPLAKE 16	7/19/2010 10:12	86.0	77	8.3	8.3	6
SITE: UPLAKE 16	7/19/2010 10:12	85.9	73	8.3	8.3	7
SITE: UPLAKE 16	7/19/2010 10:12	85.9	76	8.3	8.3	8
SITE: UPLAKE 16	7/19/2010 10:12	85.9	73	8.3	8.3	9
SITE: UPLAKE 16	7/19/2010 10:13	85.9	76	8.3	8.3	10
SITE: UPLAKE 16	7/19/2010 10:13	85.0	77	8.0	8.2	11
SITE: UPLAKE 16	7/19/2010 10:13	84.3	77	6.2	8.1	12
SITE: UPLAKE 16	7/19/2010 10:13	84.0	77	5.5	8.0	13
SITE: UPLAKE 16	7/19/2010 10:13	83.9	77	4.6	8.0	14
SITE: UPLAKE 16	7/19/2010 10:13	83.7	74	4.2	7.9	15
SITE: UPLAKE 16	7/19/2010 10:14	83.2	77	2.6	7.7	16
SITE: UPLAKE 16	7/19/2010 10:14	83.2	77	2.5	7.7	18
SITE: UPLAKE 16	7/19/2010 10:14	83.1	77	2.3	7.7	18
SITE: UPLAKE 16	7/19/2010 10:14	83.0	77	1.7	7.4	19
SITE: UPLAKE 16	7/19/2010 10:15	82.8	77	1.7	7.4	20
SITE: UPLAKE 16	7/19/2010 10:15	82.7	77	1.5	7.4	21
SITE: UPLAKE 16	7/19/2010 10:15	82.5	78	1.2	7.4	22
SITE: UPLAKE 16	7/19/2010 10:15	82.3	79	1.1	7.3	23

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	8/17/2010 11:23	87.7	82	7.0	7.9	0
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	87.1	83	6.8	7.8	1
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.9	83	6.3	7.8	2
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.7	82	5.9	7.7	3
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.6	82	5.8	7.7	4
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.6	81	5.7	7.7	5
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.6	81	5.7	7.6	6
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.6	80	5.6	7.6	7
SITE: INTAKE CHANNEL 2	8/17/2010 11:24	86.6	82	5.6	7.6	8
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.6	79	5.6	7.6	9
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.6	79	5.7	7.6	10
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.5	80	5.7	7.6	11
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.2	81	5.6	7.5	12
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.2	81	5.5	7.5	13
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.1	83	5.4	7.5	14
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.0	83	5.3	7.5	15
SITE: INTAKE CHANNEL 2	8/17/2010 11:25	86.0	81	5.2	7.5	16
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.9	83	5.2	7.5	17
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.9	81	5.2	7.4	18
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.9	81	5.1	7.4	19
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.9	81	5.1	7.4	20
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.8	81	5.1	7.4	21
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.7	81	5.1	7.4	22
SITE: INTAKE CHANNEL 2	8/17/2010 11:26	85.3	83	5.0	7.4	23

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	8/17/2010 11:34	105.5	84	5.8	7.5	0
SITE: DISCHARGE 6	8/17/2010 11:34	95.0	84	6.5	7.5	1
SITE: DISCHARGE 6	8/17/2010 11:34	88.8	78	6.9	7.5	2
SITE: DISCHARGE 6	8/17/2010 11:34	87.6	80	6.8	7.5	3
SITE: DISCHARGE 6	8/17/2010 11:34	87.3	80	6.9	7.5	4
SITE: DISCHARGE 6	8/17/2010 11:34	87.0	79	6.7	7.5	5
SITE: DISCHARGE 6	8/17/2010 11:34	86.9	78	6.4	7.4	6
SITE: DISCHARGE 6	8/17/2010 11:35	86.8	79	5.8	7.4	7
SITE: DISCHARGE 6	8/17/2010 11:35	86.7	79	5.5	7.4	8

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	8/17/2010 11:48	88.8	79	9.0	8.4	0
SITE: UPLAKE 16	8/17/2010 11:48	88.9	78	9.1	8.4	1
SITE: UPLAKE 16	8/17/2010 11:48	88.3	78	9.0	8.4	2
SITE: UPLAKE 16	8/17/2010 11:48	88.0	78	9.1	8.4	3
SITE: UPLAKE 16	8/17/2010 11:48	87.8	78	9.0	8.4	4
SITE: UPLAKE 16	8/17/2010 11:48	87.8	78	8.9	8.3	5
SITE: UPLAKE 16	8/17/2010 11:48	87.7	77	8.7	8.3	6
SITE: UPLAKE 16	8/17/2010 11:48	87.7	77	8.6	8.2	7
SITE: UPLAKE 16	8/17/2010 11:48	87.6	77	8.2	8.2	8
SITE: UPLAKE 16	8/17/2010 11:48	87.4	77	8.0	8.1	9
SITE: UPLAKE 16	8/17/2010 11:49	86.8	77	6.9	8.0	10
SITE: UPLAKE 16	8/17/2010 11:49	86.5	77	6.0	8.0	11
SITE: UPLAKE 16	8/17/2010 11:49	86.4	77	4.9	7.9	12
SITE: UPLAKE 16	8/17/2010 11:49	86.4	77	4.6	7.9	13
SITE: UPLAKE 16	8/17/2010 11:49	86.3	77	4.3	7.8	14
SITE: UPLAKE 16	8/17/2010 11:49	86.2	77	3.9	7.8	15
SITE: UPLAKE 16	8/17/2010 11:49	86.1	75	3.8	7.7	16
SITE: UPLAKE 16	8/17/2010 11:49	85.9	75	3.4	7.7	17
SITE: UPLAKE 16	8/17/2010 11:49	85.8	77	2.9	7.6	18
SITE: UPLAKE 16	8/17/2010 11:49	85.7	77	2.6	7.6	19
SITE: UPLAKE 16	8/17/2010 11:50	85.6	77	2.0	7.6	20
SITE: UPLAKE 16	8/17/2010 11:50	85.6	79	1.8	7.5	21

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	9/23/2010 9:48	83.1	89	5.9	7.7	0
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	83.1	85	5.9	7.6	1
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	83.0	85	5.8	7.6	2
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	83.0	85	5.8	7.6	3
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	82.9	85	5.7	7.6	4
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	82.9	84	5.7	7.5	5
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	82.9	84	5.7	7.5	6
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	82.9	84	5.6	7.5	7
SITE: INTAKE CHANNEL 2	9/23/2010 9:49	82.9	84	5.6	7.5	8
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.9	84	5.6	7.5	9
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.9	84	5.5	7.5	10
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.9	84	5.5	7.5	11
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	84	5.5	7.5	12
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	84	5.5	7.5	13
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	83	5.5	7.4	14
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	83	5.5	7.4	15
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	83	5.5	7.4	16
SITE: INTAKE CHANNEL 2	9/23/2010 9:50	82.8	85	5.5	7.4	17
SITE: INTAKE CHANNEL 2	9/23/2010 9:51	82.8	82	5.5	7.4	18
SITE: INTAKE CHANNEL 2	9/23/2010 9:51	82.8	82	5.5	7.4	19
SITE: INTAKE CHANNEL 2	9/23/2010 9:51	82.8	83	5.4	7.4	20

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	9/23/2010 10:02	83.8	85	6.6	7.5	0
SITE: DISCHARGE 6	9/23/2010 10:03	83.7	85	6.2	7.4	1
SITE: DISCHARGE 6	9/23/2010 10:03	83.6	84	5.9	7.4	2
SITE: DISCHARGE 6	9/23/2010 10:03	83.4	84	5.6	7.4	3
SITE: DISCHARGE 6	9/23/2010 10:03	83.3	84	5.5	7.4	4
SITE: DISCHARGE 6	9/23/2010 10:03	83.2	84	5.4	7.3	5
SITE: DISCHARGE 6	9/23/2010 10:03	83.1	84	5.2	7.3	6
SITE: DISCHARGE 6	9/23/2010 10:03	83.0	84	5.1	7.3	7
SITE: DISCHARGE 6	9/23/2010 10:03	82.9	82	4.9	7.3	8



## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	9/23/2010 10:32	84.6	84	8.1	8.1	0
SITE: UPLAKE 16	9/23/2010 10:32	84.6	84	8.1	8.1	1
SITE: UPLAKE 16	9/23/2010 10:33	84.6	84	8.0	8.1	2
SITE: UPLAKE 16	9/23/2010 10:33	84.5	83	8.0	8.1	3
SITE: UPLAKE 16	9/23/2010 10:33	84.5	83	7.9	8.1	4
SITE: UPLAKE 16	9/23/2010 10:33	84.5	83	7.9	8.1	5
SITE: UPLAKE 16	9/23/2010 10:33	84.5	83	7.9	8.1	6
SITE: UPLAKE 16	9/23/2010 10:33	84.4	83	7.8	8.1	7
SITE: UPLAKE 16	9/23/2010 10:33	84.4	82	7.8	8.1	8
SITE: UPLAKE 16	9/23/2010 10:33	84.4	82	7.8	8.1	9
SITE: UPLAKE 16	9/23/2010 10:33	84.4	82	7.8	8.1	10
SITE: UPLAKE 16	9/23/2010 10:33	84.3	81	7.8	8.0	11
SITE: UPLAKE 16	9/23/2010 10:33	83.9	81	7.8	8.0	12
SITE: UPLAKE 16	9/23/2010 10:34	83.6	81	7.5	8.0	13
SITE: UPLAKE 16	9/23/2010 10:34	83.4	81	6.6	7.9	14
SITE: UPLAKE 16	9/23/2010 10:34	83.2	81	6.0	7.8	15
SITE: UPLAKE 16	9/23/2010 10:34	83.2	81	5.6	7.8	16
SITE: UPLAKE 16	9/23/2010 10:34	83.1	81	4.9	7.8	17
SITE: UPLAKE 16	9/23/2010 10:34	83.0	81	4.5	7.7	18
SITE: UPLAKE 16	9/23/2010 10:34	83.0	81	4.4	7.7	19
SITE: UPLAKE 16	9/23/2010 10:34	82.9	81	4.2	7.7	20
SITE: UPLAKE 16	9/23/2010 10:34	82.9	81	3.9	7.6	21
SITE: UPLAKE 16	9/23/2010 10:34	82.8	81	3.8	7.6	22
SITE: UPLAKE 16	9/23/2010 10:34	82.7	87	3.7	7.6	23

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	10/26/2010 10:08	73.1	78	8.5	7.6	0
SITE: INTAKE CHANNEL 2	10/26/2010 10:08	73.1	74	8.3	7.5	1
SITE: INTAKE CHANNEL 2	10/26/2010 10:08	73.0	78	8.2	7.5	2
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.9	75	8.1	7.5	3
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.9	78	8.1	7.5	4
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.9	78	8.0	7.5	5
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.9	78	8.0	7.5	6
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.8	78	7.9	7.5	7
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.8	78	7.9	7.5	8
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.8	75	7.9	7.5	9
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.8	78	7.8	7.5	10
SITE: INTAKE CHANNEL 2	10/26/2010 10:09	72.8	78	7.8	7.5	11
SITE: INTAKE CHANNEL 2	10/26/2010 10:10	72.8	75	7.8	7.5	12
SITE: INTAKE CHANNEL 2	10/26/2010 10:10	72.7	78	7.8	7.5	13
SITE: INTAKE CHANNEL 2	10/26/2010 10:10	72.7	78	7.7	7.5	14
SITE: INTAKE CHANNEL 2	10/26/2010 10:10	72.7	78	7.7	7.5	15
SITE: INTAKE CHANNEL 2	10/26/2010 10:10	72.6	75	7.7	7.5	16
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	72.3	79	7.7	7.4	17
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	72.1	80	7.7	7.4	18
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	71.8	81	7.7	7.4	19
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	71.7	81	7.7	7.4	20
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	71.7	81	7.7	7.4	21
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	71.6	81	7.7	7.4	22
SITE: INTAKE CHANNEL 2	10/26/2010 10:11	71.6	81	7.7	7.4	23

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	10/26/2010 10:16	83.8	85	6.6	7.5	0
SITE: DISCHARGE 6	10/26/2010 10:16	83.7	85	6.2	7.4	1
SITE: DISCHARGE 6	10/26/2010 10:16	83.6	84	5.9	7.4	2
SITE: DISCHARGE 6	10/26/2010 10:16	83.4	84	5.6	7.4	3
SITE: DISCHARGE 6	10/26/2010 10:16	83.3	84	5.5	7.4	4
SITE: DISCHARGE 6	10/26/2010 10:16	83.2	84	5.4	7.3	5
SITE: DISCHARGE 6	10/26/2010 10:16	83.1	84	5.2	7.3	6
SITE: DISCHARGE 6	10/26/2010 10:16	83.0	84	5.1	7.3	7
SITE: DISCHARGE 6	10/26/2010 10:16	82.9	82	4.9	7.3	8

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	10/26/2010 1032	85	84	8.3	8.1	0
SITE: UPLAKE 16	10/26/2010 1032	85	84	8.1	8.1	1
SITE: UPLAKE 16	10/26/2010 1032	85	84	8.0	8.1	2
SITE: UPLAKE 16	10/26/2010 1032	85	83	8.0	8.1	3
SITE: UPLAKE 16	10/26/2010 1032	84	83	7.9	8.1	4
SITE: UPLAKE 16	10/26/2010 1032	84	83	7.9	8.1	5
SITE: UPLAKE 16	10/26/2010 1033	84	83	7.9	8.1	6
SITE: UPLAKE 16	10/26/2010 1033	84	83	7.8	8.1	7
SITE: UPLAKE 16	10/26/2010 1033	84	82	7.8	8.1	8
SITE: UPLAKE 16	10/26/2010 1033	84	82	7.8	8.1	9
SITE: UPLAKE 16	10/26/2010 1033	84	82	7.8	8.1	10
SITE: UPLAKE 16	10/26/2010 1033	84	81	7.8	8.0	11
SITE: UPLAKE 16	10/26/2010 1033	84	81	7.8	8.0	12
SITE: UPLAKE 16	10/26/2010 1033	84	81	7.5	8.0	13
SITE: UPLAKE 16	10/26/2010 1034	83	81	6.6	7.9	14
SITE: UPLAKE 16	10/26/2010 1034	83	81	6.0	7.8	15
SITE: UPLAKE 16	10/26/2010 1034	83	81	5.6	7.8	16
SITE: UPLAKE 16	10/26/2010 1034	83	81	4.9	7.8	17
SITE: UPLAKE 16	10/26/2010 1034	83	81	4.5	7.7	18
SITE: UPLAKE 16	10/26/2010 1034	83	81	4.4	7.7	19
SITE: UPLAKE 16	10/26/2010 1034	83	81	4.2	7.7	20
SITE: UPLAKE 16	10/26/2010 1034	83	81	3.9	7.6	21
SITE: UPLAKE 16	10/26/2010 1035	83	81	3.8	7.6	22
SITE: UPLAKE 16	10/26/2010 1035	83	87	3.7	7.6	23

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	11/11/2010 10:31	67.3	83	9.3	7.9	0
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.4	83	8.4	7.9	1
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.3	83	8.2	7.9	2
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.2	83	8.1	7.8	3
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.2	83	8.1	7.8	4
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.2	83	8.0	7.8	5
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.1	83	8.0	7.8	6
SITE: INTAKE CHANNEL 2	11/11/2010 10:32	67.1	83	8.0	7.8	7
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.1	82	8.0	7.8	8
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.1	82	8.0	7.8	9
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.1	82	7.9	7.8	10
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.1	82	7.9	7.8	11
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.0	82	7.9	7.7	12
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.0	82	7.9	7.7	13
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	67.0	82	7.9	7.7	14
SITE: INTAKE CHANNEL 2	11/11/2010 10:33	66.9	82	7.9	7.7	15
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	66.4	83	8.0	7.7	16
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	66.2	83	8.0	7.7	17
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	66.1	83	8.0	7.7	18
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	66.0	83	8.0	7.7	19
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	65.9	83	8.0	7.7	20
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	65.9	83	8.0	7.7	21
SITE: INTAKE CHANNEL 2	11/11/2010 10:34	65.9	83	8.0	7.7	22

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	11/11/2010 10:41	89.5	85	8.8	7.7	0
SITE: DISCHARGE 6	11/11/2010 10:41	79.8	79	9.3	7.7	1
SITE: DISCHARGE 6	11/11/2010 10:41	70.4	82	10.1	7.7	2
SITE: DISCHARGE 6	11/11/2010 10:42	68.8	82	9.3	7.7	3
SITE: DISCHARGE 6	11/11/2010 10:42	68.3	82	8.5	7.7	4
SITE: DISCHARGE 6	11/11/2010 10:42	68.2	82	8.4	7.7	5
SITE: DISCHARGE 6	11/11/2010 10:42	68.1	82	8.3	7.7	6
SITE: DISCHARGE 6	11/11/2010 10:42	67.9	82	8.2	7.6	7

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	11/11/2010 11:08	68.2	82	13.3	7.9	0
SITE: UPLAKE 16	11/11/2010 11:09	68.2	82	10.0	7.9	1
SITE: UPLAKE 16	11/11/2010 11:09	68.2	82	9.8	7.9	2
SITE: UPLAKE 16	11/11/2010 11:09	68.1	82	9.6	7.9	3
SITE: UPLAKE 16	11/11/2010 11:09	68.1	82	9.5	7.9	4
SITE: UPLAKE 16	11/11/2010 11:09	68.0	82	9.4	7.9	5
SITE: UPLAKE 16	11/11/2010 11:09	68.0	82	9.3	7.8	6
SITE: UPLAKE 16	11/11/2010 11:09	67.9	82	9.3	7.8	7
SITE: UPLAKE 16	11/11/2010 11:09	67.8	82	9.1	7.8	8
SITE: UPLAKE 16	11/11/2010 11:10	67.7	81	9.0	7.8	9
SITE: UPLAKE 16	11/11/2010 11:10	67.5	81	8.8	7.8	11
SITE: UPLAKE 16	11/11/2010 11:10	67.4	81	8.7	7.7	12
SITE: UPLAKE 16	11/11/2010 11:10	67.3	81	8.6	7.7	13
SITE: UPLAKE 16	11/11/2010 11:10	67.2	80	8.5	7.7	14
SITE: UPLAKE 16	11/11/2010 11:10	67.1	80	8.5	7.7	15
SITE: UPLAKE 16	11/11/2010 11:10	67.0	80	8.5	7.7	16
SITE: UPLAKE 16	11/11/2010 11:10	66.9	80	8.5	7.7	17
SITE: UPLAKE 16	11/11/2010 11:11	66.9	80	8.5	7.7	18
SITE: UPLAKE 16	11/11/2010 11:11	66.8	80	8.3	7.7	19
SITE: UPLAKE 16	11/11/2010 11:11	66.8	77	8.3	7.7	20
SITE: UPLAKE 16	11/11/2010 11:11	66.7	80	8.3	7.6	21
SITE: UPLAKE 16	11/11/2010 11:11	66.7	80	8.2	7.6	22
SITE: UPLAKE 16	11/11/2010 11:11	66.6	80	8.1	7.6	23



2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: INTAKE CHANNEL 2	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: INTAKE CHANNEL 2	M/D/Y	F	uS/cm	mg/L		m
SITE: INTAKE CHANNEL 2	12/17/2010 10:26	53.8	86	11.8	7.6	0
SITE: INTAKE CHANNEL 2	12/17/2010 10:26	53.8	86	11.6	7.6	1
SITE: INTAKE CHANNEL 2	12/17/2010 10:26	53.8	82	11.4	7.5	2
SITE: INTAKE CHANNEL 2	12/17/2010 10:26	53.7	86	11.3	7.5	3
SITE: INTAKE CHANNEL 2	12/17/2010 10:27	53.4	86	11.4	7.5	4
SITE: INTAKE CHANNEL 2	12/17/2010 10:27	53.4	86	11.4	7.5	5
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.3	82	11.4	7.5	6
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.2	86	11.4	7.5	7
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.3	86	11.3	7.5	8
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.3	86	11.3	7.5	9
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.3	82	11.3	7.5	10
SITE: INTAKE CHANNEL 2	12/17/2010 10:28	53.2	82	11.3	7.5	11
SITE: INTAKE CHANNEL 2	12/17/2010 10:29	53.2	86	11.3	7.5	12
SITE: INTAKE CHANNEL 2	12/17/2010 10:29	53.1	82	11.3	7.5	13
SITE: INTAKE CHANNEL 2	12/17/2010 10:29	53.1	86	11.3	7.5	14
SITE: INTAKE CHANNEL 2	12/17/2010 10:29	53.0	86	11.3	7.5	15
SITE: INTAKE CHANNEL 2	12/17/2010 10:29	52.9	86	11.3	7.5	16
SITE: INTAKE CHANNEL 2	12/17/2010 10:30	52.7	86	11.4	7.5	17
SITE: INTAKE CHANNEL 2	12/17/2010 10:30	52.3	86	11.5	7.5	18
SITE: INTAKE CHANNEL 2	12/17/2010 10:30	51.3	87	11.6	7.5	19
SITE: INTAKE CHANNEL 2	12/17/2010 10:30	50.3	88	11.9	7.5	20
SITE: INTAKE CHANNEL 2	12/17/2010 10:30	50.1	88	12.0	7.5	21
SITE: INTAKE CHANNEL 2	12/17/2010 10:31	49.7	88	12.2	7.4	22

2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: DISCHARGE 6	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: DISCHARGE 6	M/D/Y	F	uS/cm	mg/L		m
SITE: DISCHARGE 6	12/17/2010 10:40	73.5	87	11.0	7.5	0
SITE: DISCHARGE 6	12/17/2010 10:40	62.3	86	12.0	7.5	1
SITE: DISCHARGE 6	12/17/2010 10:40	54.7	85	12.7	7.6	2
SITE: DISCHARGE 6	12/17/2010 10:41	54.3	85	12.1	7.5	3
SITE: DISCHARGE 6	12/17/2010 10:41	54.1	85	11.8	7.5	4
SITE: DISCHARGE 6	12/17/2010 10:41	54.0	85	11.6	7.5	5
SITE: DISCHARGE 6	12/17/2010 10:41	54.0	85	11.4	7.5	6
SITE: DISCHARGE 6	12/17/2010 10:42	54.0	85	11.3	7.5	7
SITE: DISCHARGE 6	12/17/2010 10:42	53.9	85	11.3	7.5	8
SITE: DISCHARGE 6	12/17/2010 10:42	53.9	85	11.3	7.5	9
SITE: DISCHARGE 6	12/17/2010 10:42	53.9	88	11.2	7.5	10

## 2010 MONTICELLO RESERVOIR WATER QUALITY

SITE: UPLAKE 16	DateTime	Temp	SpCond	DO Conc	pH	Depth
SITE: UPLAKE 16	M/D/Y	F	uS/cm	mg/L		m
SITE: UPLAKE 16	12/17/2010 10:02	54.7	91	10.7	7.7	0
SITE: UPLAKE 16	12/17/2010 10:03	54.7	88	10.4	7.7	1
SITE: UPLAKE 16	12/17/2010 10:03	54.7	88	10.2	7.7	2
SITE: UPLAKE 16	12/17/2010 10:04	54.5	87	10.2	7.6	3
SITE: UPLAKE 16	12/17/2010 10:04	54.3	87	10.1	7.6	4
SITE: UPLAKE 16	12/17/2010 10:04	54.2	87	10.1	7.6	5
SITE: UPLAKE 16	12/17/2010 10:04	54.0	87	10.1	7.6	6
SITE: UPLAKE 16	12/17/2010 10:05	53.9	87	10.1	7.5	7
SITE: UPLAKE 16	12/17/2010 10:05	53.7	87	10.1	7.5	8
SITE: UPLAKE 16	12/17/2010 10:05	53.3	87	10.1	7.5	9
SITE: UPLAKE 16	12/17/2010 10:06	53.2	89	10.1	7.5	10
SITE: UPLAKE 16	12/17/2010 10:06	53.2	87	10.0	7.5	11
SITE: UPLAKE 16	12/17/2010 10:06	53.2	87	10.0	7.5	12
SITE: UPLAKE 16	12/17/2010 10:06	53.1	87	10.0	7.5	13
SITE: UPLAKE 16	12/17/2010 10:07	53.1	87	10.0	7.5	14
SITE: UPLAKE 16	12/17/2010 10:07	53.1	86	10.0	7.5	15
SITE: UPLAKE 16	12/17/2010 10:07	53.0	86	10.0	7.4	16
SITE: UPLAKE 16	12/17/2010 10:07	52.9	86	10.0	7.4	17
SITE: UPLAKE 16	12/17/2010 10:08	52.7	86	10.0	7.4	18
SITE: UPLAKE 16	12/17/2010 10:08	52.7	86	10.0	7.4	19
SITE: UPLAKE 16	12/17/2010 10:08	52.6	88	10.0	7.4	20
SITE: UPLAKE 16	12/17/2010 10:09	52.6	86	10.0	7.4	21
SITE: UPLAKE 16	12/17/2010 10:09	52.6	88	10.0	7.4	22

SC DHEC  
Attachment VIII  
LTD 286, CR-11-05986  
RC-12-0019  
Page 1 of 2

# PQL LIST

### Clean Water Act MDL Values

MDL values in the following table that has been established for analyses performed in the Environmental Laboratory. This table, or parts of this table, may be posted at several locations in the Environmental Laboratory.

PARAMETER	METHOD	SM/EPA NUMBER	MDL	
COPPER	FLAA	SM 3111B	0.01	PPM
IRON	FLAA	SM 3111B	0.02	PPM
AMMONIA	CP-154	SM 4500-NH3 D	0.100	PPM
RES. CHLORINE	CP-172	SM 4500-CL G	0.050	PPM
RES. CHLORINE	CP-186	SM 4500-CL D	0.010 *	PPM
OIL & GREASE	CP-188	EPA 1664A	N/A	PPM
OIL & GREASE	CP-188	EPA 1664A Manual	1.5	PPM

\* MDL is 0.01 by scale detection.

1/25/2012

# MIXING ZONE TOXICITY SUPPLEMENT

**NPDES APPLICATION SUPPLEMENT****Mixing Zone Request  
for  
Surface Water Discharges**

NPDES #: SC0030856  
Facility Name: Virgil C. Summer Nuclear Station  
County: Fairfield

**Are you requesting a mixing zone for whole effluent toxicity (WET) in accordance with the back of this form?**

☒ **No.** No further information is needed. Submit this form. If WET testing is required, a chronic test at 100% will be required, unless the IWC is at least 80%. Proposed IWC \_\_\_\_\_ %

☐ **Yes.** Check one of the boxes below and submit this form with the appropriate information.

☐ Check this block if you are proposing to perform or have performed a mixing zone demonstration to determine the appropriate zone of initial dilution (ZID) and/or mixing zone size. Complete the remainder of this form and submit a mixing zone demonstration plan as described on the back of this form. The Department recommends the demonstration plan be approved prior to implementation of any demonstration work.

☐ Check this block if you are requesting a mixing zone by providing limited information such as a mixing model like CORMIX to determine mixing in accordance with suggested zone of initial dilution (ZID) and/or mixing zone sizes. Complete the remainder of this form, as applicable, and submit the CORMIX Supplement and modeling results (or other model assumptions, inputs and results).

What is the proposed ZID size (in meters)? Length: \_\_\_\_\_ m Width: \_\_\_\_\_ m

What is the proposed acute WET test concentration? \_\_\_\_\_ %

What is the proposed mixing zone size (in meters)? Length: \_\_\_\_\_ m Width: \_\_\_\_\_ m

What is the proposed chronic WET test concentration? \_\_\_\_\_ %

Printed Name: Thomas D. Gatlin Firm: VCSNS

Signature: *Thomas D. Gatlin* Date: 2/1/12