



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

April 16, 2010

Ms. B. Marie Moore
Nuclear Fuel Services, Inc.
Director Safety & Regulatory
1205 Banner Hill Rd.
Erwin, TN 37650

Subject: **Notice of Complete Application for NPDES Permit Number TN0002038
Nuclear Fuel Services
Erwin, Unicoi County, Tennessee**

Dear Ms. Moore:

The Division of Water Pollution Control (the division) acknowledges the receipt of a permit application in our office on March 25, 2010. Rules of the Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-5-.05 (2): *Permit Application, Issuance, state*, in part:

"The applicant will be provided notice of completeness of the application and re-submitted material within 30 days of a determination that such material constitutes a complete application. This provision does not preclude the commissioner from later requesting additional material that subsequent to the notice of completeness is determined to be necessary for permit processing."

Our review of the individual NPDES permit application showed that you have submitted all the information required for the permit reissuance. If your complete application was mailed to our office 180 days prior to the current permit expiration date of August 31, 2010, and the permit is not reissued by that date, discharges from the facility will be automatically authorized through administrative extension of the current permit.

If you have questions, please contact the division at your local Field Office at 1-888-891-TDEC; or, at this office, please contact Miss Julie Harse at (615) 532-0682 or by E-mail at Julie.Harse@tn.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "V. Janjić".

Mr. Vojin Janjić
Manager, Permit Section
Division of Water Pollution Control

cc: Division of Water Pollution Control, Permit Section

Division of Water Pollution Control
Johnson City Environmental ~~Field Office~~ *Field Office*
PERMIT APPLICATION CHECK LIST

The purpose of this check list is to assist the review of permit applications received in the JCEAC. The objective of the review is to determine if the application is valid and complete so that it can be forwarded to the Central Office for further processing. The review should be completed based on the reviewer's knowledge of the discharger and information in the JCEAC files.

Facility Name: Nuclear Fuel Services

Permit Number (if existing): TN0002038 County: Unicoi

1. Is above information correctly shown on application? YES NO

2. Have correct application forms been submitted? YES NO

3. Are addresses for mailing and facility location correct? YES NO
Correct address(es) _____

4. Is the name of the receiving water(s) stated correctly? YES NO
Correct name(s): _____ mile: _____
tributary of _____ mile: _____

5. Have all outfalls been listed and shown on map? YES NO
Omitted outfalls: _____

6. Have the wastewater types (sources) and type of treatment units been correctly identified? YES NO

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Correct types(s): MAR 25 2010

7. For industrials, do SIC code and description appear correct? YES NO

if not, verify with discharger before sending application to Permits: **DONE**
attach documentation.

8. Has all information, including data from organic analyses and latitude and longitude, been recorded as requested or required on application? YES NO
missing information: _____

9. Are there any obvious errors, omissions, inconsistencies in the information? YES NO

What are they? _____

10. Is there an original (not copy) signature on the application? YES NO

Is the person the owner, principal executive officer of at least vice-president, multi-state area manager, or ranking elected official? YES NO

If no, application was returned on : _____

11. For new discharges, have plans and specs been approved? YES NO N/A

If no, has Central Office been advised to hold final permit? YES NO

12. What other information should permit writer have on this discharge? Do any existing limits, conditions, reporting requirements, etc. need to be dropped or new ones added? Give justification and attach supporting documents. _____

* See attached memo

13. If application has been returned, memo to Permits Section sent: _____ (date)

14. Application package sent to Central Office on: _____ (date)

Include:	Done
Cover memo or route slip	<input type="checkbox"/>
Application with original signature	<input type="checkbox"/>
Copy of these check notes & attachments	<input type="checkbox"/>

Date Entered 3/25/10
Date Approved MAR 25

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MAR 25 2010

Permit Section

Memo

To: WPC Permit Section

From: Beverly Brown and Jeff Horton, Johnson City Field Office

Date: March 22, 2010

Subject: NFS Storm Water Issues

NFS is covered by TMSP TNR050873. NFS has significantly exceeded the benchmark values for magnesium, aluminum, and nitrate/nitrite as nitrogen for many years. NFS has brought this issue to the attention of the permit section in the past, as documented by reference letters to the Division dating back to 1999. Apparently NFS has data that shows surface and groundwater in the area having higher amounts of magnesium present than their permit benchmark. The elevated aluminum numbers and nitrate/nitrite as nitrogen in NFS storm water cannot be accounted for.

The Johnson City Field Office would like to suggest that NFS might be better served to have their storm water monitoring program be covered under their NPDES permit, not the TMSP. This would allow limits to be established that would take into account the high surface and groundwater numbers documented in the area.

BTB/JKH

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Permit Section

DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL

WATERSHED EVALUATION AND ANTIDegradation POLICY CHECKLIST I

(Field Office Review)

WATERSHED EVALUATION:

FACILITY NAME: Nuclear Fuel Services

PERMIT NO. (if existing): TN0002038 COUNTY (facility site): Union

APPLICATION REC'D. DATE: 2/25/10 REVIEWED BY: BTB

WATERSHED GROUP NO.: 5 HUC: 06010108

WATERSHED NAME: Nolichucky

Is the receiving stream(s) named correctly in the permit application: YES NO

If "NO", give the correct name of the receiving stream(s): _____ Mile no.: _____

The receiving stream is a tributary of: _____ Mile no.: _____

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TIER 1

ADAPTED FROM TN RULE 1200-4-3-.06(5)

Permit Section

Generally, new discharges and increases in existing discharges are allowed provided the effluent limitations meet water quality standards and conditions. However, in the event the receiving stream is listed on the 303(d) list for a particular effluent characteristic requested to be discharged, the following conditions apply: (1) if the source of the discharge is not the receiving stream, the effluent limitations must meet water quality standards and conditions; or (2) if the source of the discharge is the receiving stream, the effluent limitations should meet water quality standards and conditions but may be relaxed to a level above the water quality standards, but in no event above the in-stream conditions of the 303(d) parameter listed.

TIER 2

ADAPTED FROM TN RULE 1200-4-3-.06(4)

Generally, new discharges and increases in existing discharges that will cause permanent degradation are not allowed unless and until it is affirmatively demonstrated to the Water Quality Control Board a change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any classified uses existing in such waters.

ONRW

ADAPTED FROM TN RULE 1200-4-3-.06(3)

Generally, new discharges and increases in existing discharges are not allowed unless the following conditions are met: (1) such activities can consistently meet or exceed the water quality conditions of the ONRW; or (2) such activities will not result in permanent degradation of the water quality.



NUCLEAR FUEL SERVICES, INC.
a subsidiary of The Babcock & Wilcox Company

■ 1205 banner hill road ■ erwin, tn 37650 ■ phone 423.743.9141
■ www.nuclearfuelservices.com

21G-10-0063
GOV-05-01-01
ACF-10-0093

March 19, 2010

U.S. Environmental Protection Agency
Permit Section
Sam Nun Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

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MAR 22 2010

**JOHNSON CITY ENVIRONMENTAL
ASSISTANCE CENTER**

Reference: NPDES Permit No. TN0002038

Dear Sirs:

Recent reorganizational activities at Nuclear Fuel Services, Inc. (NFS) have resulted in several changes to personnel and position titles. NFS submitted its NPDES Permit Renewal Application on February 24, 2010. At the request of Mrs. Beverly Brown, State of Tennessee, Johnson City Field Office, the NPDES Permit signatory pages are being resubmitted under the signature of President, Mr. David B. Amerine. EPA Form 3510-1, General Information, page 2 and EPA Form 3510-2C, Wastewater Discharge Information, page 4 are enclosed as Attachment I.

If you or you staff have any questions, require additional information, or wish to discuss this, please contact me or Mr. Robert Holley, Environmental Safety Manager, at (423) 743-1777. Please reference our unique document identification number (21G-10-0063) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

David B. Amerine,
President

Attachment

✓ copy: Mr. Jeff Horton
Environmental Field Office Manager
Johnson City Environmental Assistance Center
2305 Silverdale Road
Johnson City, TN 37601-2162

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MAR 25 2010

nuclear fuel services, inc., a subsidiary of The Babcock & Wilcox Company
Permit Section

21G-10-0063
GOV-05-01-01
ACF-10-0093

Attachment I

EPA Form 3510-1 and EPA Form 3510-2C

(2 pages to follow)

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MAR 29 2010

JOHNSON CITY ENVIRONMENTAL
ASSISTANCE CENTER

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)

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JOHNSON CITY ENVIRONMENTAL ASSISTANCE CENTER

VIII. CONTRACT ANALYSIS INFORMATION

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

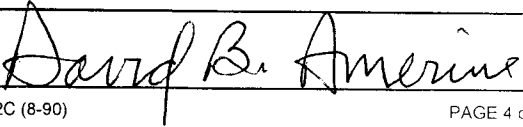
YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
General Engineering Laboratories, Inc.	2040 Sayage Road Charleston, SC 29417	(843) 556-8171	Ar, Cd, Cr, Cu, Pb, Ni, Ag

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) David B. Amerine, President	B. PHONE NO. (area code & no.) (423) 743-9141
C. SIGNATURE 	D. DATE SIGNED 3-19-10

CONTINUED FROM THE FRONT

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

A. FIRST				B. SECOND			
C	7	2819	(specify) Manufacturing & Recovery of Nuclear Fuel (Non-Irradiated), Enrichment Blending of UNH, UN & UF6 Conversion, and Ammonia Recovery	C	7		(specify) N/A
15	16	19		15	16	19	
C. THIRD				D. FOURTH			
C	7		(specify) N/A	C	7		(specify) N/A
15	16	19		15	16	19	

VIII. OPERATOR INFORMATION

A. NAME											B. Is the name listed in Item VIII-A also the owner?	
C	8	Nuclear Fuel Services, Inc.									<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
15	16										55	56

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)											D. PHONE (area code & no.)	
F = FEDERAL			M = PUBLIC (other than federal or state)			P (specify)		A		(423) 743-9141		
S = STATE			O = OTHER (specify)			56		15		6 18 19 21 22 26		
P = PRIVATE												

E. STREET OR P.O. BOX										
1205 Banner Hill Road										
26										

F. CITY OR TOWN											G. STATE	H. ZIP CODE	IX. INDIAN LAND	
C	B	Erwin									TN	37650	Is the facility located on Indian lands?	
15	16										40	41	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)						D. PSD (Air Emissions from Proposed Sources)					
C	T	I	TN0002038			C	T	I	See Attachment 2		
9	N					9	P				
15	16	17	18	30	15	16	17	18	30		

B. UIC (Underground Injection of Fluids)						E. OTHER (specify)					
C	T	I	SNM-124			(specify) NRC Special Nuclear Materials License					
9	U										
15	16	17	18	30	15	16	17	18	30		

C. RCRA (Hazardous Wastes)						E. OTHER (specify)					
C	T	I	TNR050873			(specify) NPDES Storm Water Discharge Associated with Industrial Activity					
9	R										
15	16	17	18	30	15	16	17	18	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)

Nuclear Fuel Services, Inc. (NFS) is a nuclear fuel manufacturing and uranium recovery facility. The facility also conducts enrichment blending of uranyl nitrate hexahydrate (UNH), uranyl nitrate (UN) & uranium hexafluoride (UF6) Conversion, and Ammonia Recovery. The facility is performing decommissioning/remediation activities and groundwater treatment activities, which are related to past activities.

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MAR 22 2010

JOHNSON CITY ENVIRONMENTAL ASSISTANCE CENTER

XIII. CERTIFICATION (see instructions)

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

A. NAME & OFFICIAL TITLE (type or print)				B. SIGNATURE				C. DATE SIGNED			
David B. Amerine, President				<i>David B. Amerine</i>				3-19-10			

COMMENTS FOR OFFICIAL USE ONLY

C											
C											
15	16										55



NUCLEAR FUEL SERVICES, INC.

a subsidiary of The Babcock & Wilcox Company

- 1205 banner hill road ■ erwin, tn 37650 ■ phone 423.743.9141
- www.nuclearfuelservices.com

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21G-10-0038
GOV-05-01-01
ACF-10-0059

FEB 25 2010

February 24 2010

JOHNSON CITY ENVIRONMENTAL
ASSISTANCE CENTER

U.S. Environmental Protection Agency
Permit Section
Sam Nun Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Reference: NPDES Permit No. TN0002038

Dear Sirs:

Enclosed are the Nuclear Fuel Services, Inc. (NFS) NPDES Permit Renewal Application Forms 1 and 2C. Attachments 1 through 7 and Appendices: 5-1, 5-2, 6-1 through 6-6, and 7-1 through 7-17 are also enclosed to provide additional information. A work stoppage at the NFS site prohibited the collection and analysis of samples representative of routine operations. This was communicated to Mrs. Beverly Brown, State of Tennessee, Johnson City Field Office. Mrs. Brown discussed this matter with Mr. Vojin Janjic, State of Tennessee, Division of Water Pollution Control, Nashville, Tennessee. Mr. Janjic instructed NFS to use 2005 NPDES Permit Application data for attributes not normally collected and when routine operations are resumed, to collect additional samples for analysis and submit the resulting data. The attachments and appendices flag the 2005 NPDES Permit data.

If you or you staff have any questions, require additional information, or wish to discuss this, please contact me or Mr. Robert Holley, Environmental Safety Manager, at (423) 743-1777. Please reference our unique document identification number (21G-10-0038) in any correspondence concerning this letter.

Sincerely,
NUCLEAR FUEL SERVICES, INC.

B. Marie Moore,
Safety & Regulatory

JMG/pj
Enclosure

cc: Mr. Jeff Horton
Environmental Field Office Manager
Johnson City Environmental Assistance Center
2305 Silverdale Road
Johnson City, TN 37601-2162

21G-10-0038
GOV-05-01-01
ACF-10-0059

Nuclear Fuel Services, Inc.

NPDES Permit Renewal Application

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Attachment 2	Form 1, Section X, Part D, Air Emissions from Proposed Sources
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Form 2C	Wastewater Discharge Information
Attachment 4	Form 2C, Section II, Part A, Water Flow Schematic
Attachment 4A	Form 2C, Section II, Part A, Detailed Description of Water Flow Schematic
Attachment 5	Form 2C, Section V, Part A, Outfall 001
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Attachment 5A	Form 2C, Section III, Part A, NFS SIC Code Classification
Attachment 6	Form 2C, Section V, Part B, Outfall 001
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Appendix 6-4	2005 Iron Sampling
Appendix 6-5	2005 Magnesium Sampling
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Attachment 7	Form 2C, Section V, Part C, Outfall 001
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Appendix 7-2	2009 Quarterly Metals Data
Appendix 7-3	2005 Beryllium Sampling
Appendix 7-4	2009 Cadmium Sampling
Appendix 7-5	2009 Copper Sampling
Appendix 7-6	2009 Lead Sampling
Appendix 7-7	2005 Selenium Sampling
Appendix 7-8	2009 Silver Sampling
Appendix 7-9	2005 Thallium Sampling
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Appendix 7-11	2003 - 2004 Zinc Sampling
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Appendix 7-15	2006 GC/MS Volatile Compounds Sampling
Appendix 7-16	2006 GC/MS Fraction – Acid Compounds Sampling
Appendix 7-17	2006 GC/MS Fraction-Base/Neutral Compounds Sampling

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER		T/A	C
			S	TN0002038		D
			F			
			1	2	13	14

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	Mark "X"		
	YES	NO	FORM ATTACHED		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 (<i>either existing or proposed</i>) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
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 (<i>other than those described in A or B above</i>) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes ? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
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)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

C	1	SKIP	Nuclear Fuel Services, Inc.
15	16 - 29	30	60

IV. FACILITY CONTACT

A. NAME & TITLE (<i>last, first, & title</i>)		B. PHONE (<i>area code & no.</i>)	
C	2	Moore, B. Marie, Safety & Regulatory	(423) 743-9141
15	16	45	46 48 49 51 52 55

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX		RECEIVED MAR 25 2010 Permit Section
C	3	
15	16	45

B. CITY OR TOWN		C. STATE	D. ZIP CODE
C	4	Erwin	TN 37650
15	16	40	41 42 47 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER		Date Entered 3/25/10 Date Approved MAB
C	5	
15	16	45

B. COUNTY NAME		C. CITY OR TOWN		D. STATE	E. ZIP CODE	F. COUNTY CODE (<i>if known</i>)
Unicoi		Erwin		TN	37650	N/A
46	70	40	41 42	47	51	52 -54

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)																			
A. FIRST					B. SECOND														
C					C					C					C				
7	2	8	1	9	7					7					7				
(specify) Manufacturing & Recovery of Nuclear Fuel (Non-Irradiated), Enrichment Blending of UNH, UN & UF6 Conversion, and Ammonia Recovery					(specify) N/A														
C. THIRD					D. FOURTH														
C					C					C					C				
7					7					7					7				
(specify) N/A					(specify) N/A														

VIII. OPERATOR INFORMATION																										
A. NAME													B. Is the name listed in Item VIII-A also the owner?													
C															<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO											
8	N	u	c	l	e	a	r	f	u	e	l	s	e	r	v	i	c	e	s	,	I	n	c	.		

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)													D. PHONE (area code & no.)		
F = FEDERAL			M = PUBLIC (other than federal or state)			P (specify)									
S = STATE			O = OTHER (specify)												
P = PRIVATE															
													A (423) 743-9141		

E. STREET OR P.O. BOX														
1205 Banner Hill Road														

F. CITY OR TOWN										G. STATE	H. ZIP CODE	IX. INDIAN LAND	
B Erwin										TN	37650	Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS														
A. NPDES (Discharges to Surface Water)					D. PSD (Air Emissions from Proposed Sources)									
C	T	I			C	T	I							
9	N				9	P				See Attachment 2				
TN0002038														

B. UIC (Underground Injection of Fluids)					E. OTHER (specify)									
C	T	I			C	T	I			(specify) NRC Special Nuclear Materials License				
9	U				9					SNM-124				

C. RCRA (Hazardous Wastes)					E. OTHER (specify)									
C	T	I			C	T	I			(specify) NPDES Storm Water Discharge Associated with Industrial Activity				
9	R				9					TNHW-108				
TNHW-108					TNR050873									


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)

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RECEIVED
 MAR 25 2010
 Permit Section

XIII. CERTIFICATION (see instructions)														
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.														
A. NAME & OFFICIAL TITLE (type or print)										B. SIGNATURE			C. DATE SIGNED	
B. Marie Moore, Safety & Regulatory													2/24/10	

COMMENTS FOR OFFICIAL USE ONLY														
C														
C														

Attachment 1
Form 1
Section II, Part E
Treatment, Storage, and Disposal of Hazardous Waste

Nuclear Fuel Services, Inc. submitted Form 3 in conjunction with our Hazardous Waste Treatment Storage and Disposal Permit. The Class I Modification to the Hazardous Waste Treatment Storage and Disposal Permit was issued on May 15, 2009. The Hazardous Waste Treatment Storage and Disposal Permit Number is TN HW-108; expiration date is September 30, 2012.

Attachment 2
Form 1
Section X, Part D
Air Emissions from Proposed Sources

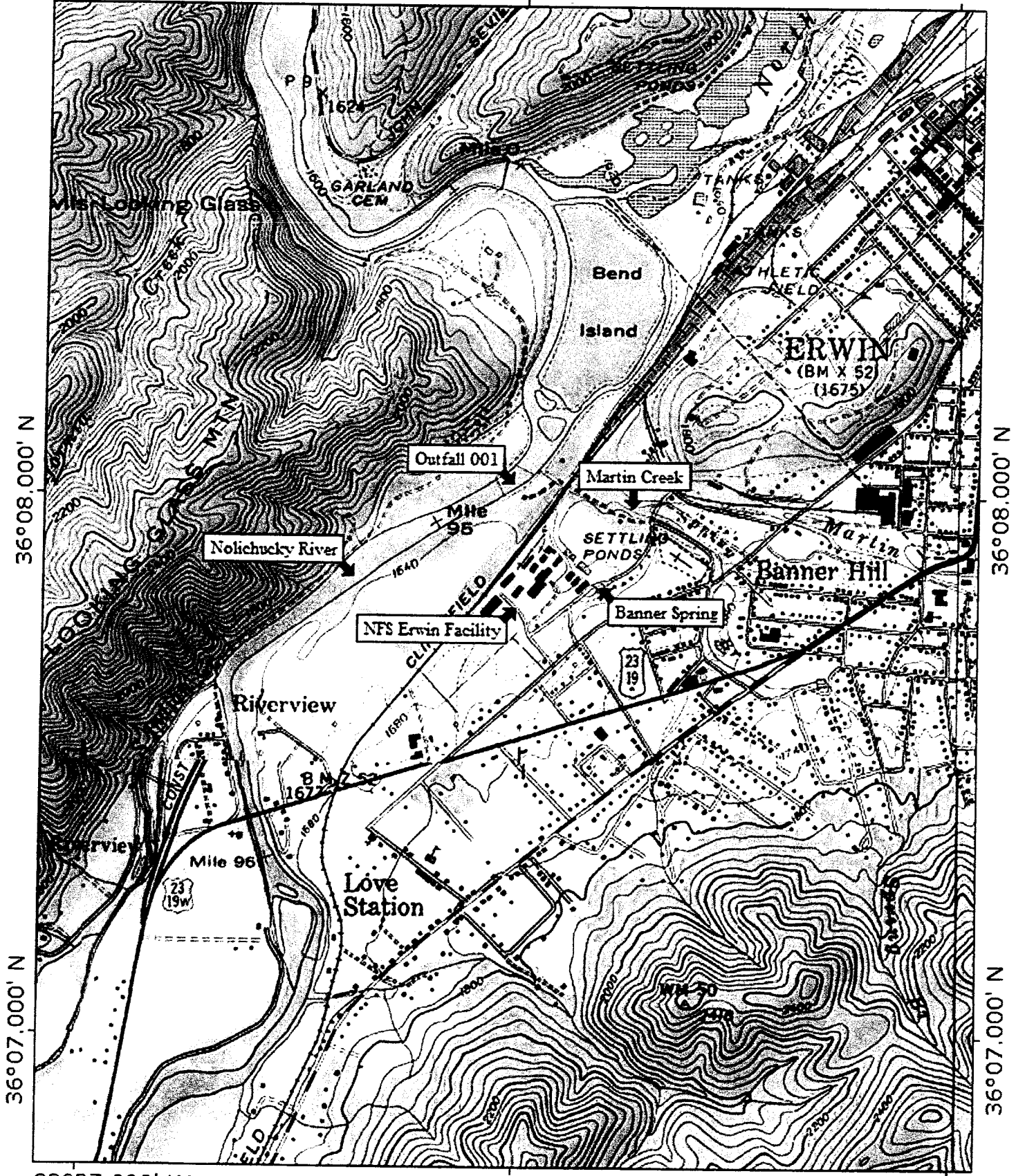
Nuclear Fuel Services, Inc. is permitted by the State of Tennessee for the following Air Pollution Control Permits: 017604P, 955420P, 954441P, 051893P, 050434F, 051889P, and 955540P.

Date Entered 3/25/10
Date
Approved MGB

Attachment 3
Form 1
Section XI
Nuclear Fuel Services, Inc. Topographic Map

ATTACHMENT 3

TOPO! map printed on 01/27/10 from "Nuclear Fuel Services.tpo" and "Untitled.tpg"
82°27.000' W 82°26.000' W WGS84 82°25.000' W



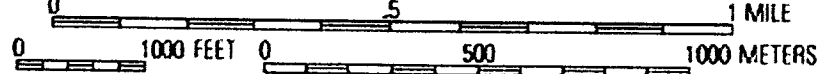
36°08.000' N

36°08.000' N

36°07.000' N

36°07.000' N

82°27.000' W 82°26.000' W WGS84 82°25.000' W



EPA I.D. NUMBER (copy from Item 1 of Form 1)
TN0002038

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

Please print or type in the unshaded areas only.

FORM 2C NPDES  **U.S. ENVIRONMENTAL PROTECTION AGENCY**
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

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

A. OUTFALL NUMBER <i>(list)</i>	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER <i>(name)</i>
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	36.00	8.00	6.00	82.00	26.00	0.00	Nolichucky River (Mile 94.6)

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. <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	a. OPERATION <i>(list)</i>	b. AVERAGE FLOW <i>(include units)</i>	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1
001	Operations are described in Attachment 4. These operations all discharge through outfall 001.	14796 GPD	1. Waste Segregation	X X
			2. Ammonia Stripping	1 A
			3. Chemical Precipitation	2 C
			4. Flocculation	1 G
			5. Pressure Filtration	5 R
			6. Dollinger Filter	5 R
			7. Ion Exchange	2 J
			8. Neutralization	2 K
			9. Fenton	2 C
			10. Discharge of Surface Water	4 A
			11. Sludge to Approved Burial Site	5 Q

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				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
001	WTF Operations	7	12	0.01	0.02	14,796 (GPD)	15,544 (GPD)	0.145 (3.5 hrs.)
III. PRODUCTION								
A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility? <input type="checkbox"/> YES (complete Item III-B) <input checked="" 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 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)						
<p style="font-size: 24pt; margin: 0;">RECEIVED</p> <p style="font-size: 18pt; margin: 0;">MAR 25 2010</p> <p style="font-size: 18pt; margin: 0;">Permit Section</p>								
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								

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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
Uranium	Major component of nuclear fuel manufacturing and recovery processing Avg. 2009 concentration: 0.5 mg/l		

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)

Empty space for listing pollutants not covered by analysis.

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)

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 Laboratories, Inc.	2040 Savage Road Charleston, SC 29417	(843) 556-8171	Ar, Cd, Cr, Cu, Pb, Ni, Ag

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (type or print) B. Marie Moore, Safety & Regulatory	B. PHONE NO. (area code & no.) (423) 743-9141
C. SIGNATURE 	D. DATE SIGNED 2/24/10

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 ID. NUMBER (copy from Item 1 of Form 1)
TN0002038

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

OUTFALL NO.
001

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

1. POLLUTANT	2. EFFLUENT				3. UNITS				4. INTAKE				
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM AVRG. VALUE		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
a. Biochemical Oxygen Demand (BOD ₅)	136	7411	Att5	Att5	Att5	Att5	2	mg/l	g	N/A	N/A	N/A	N/A
b. Chemical Oxygen Demand (COD)	368.00	36.22	259.40	14.53	192.98	10.81	115	mg/l	kg	N/A	N/A	N/A	N/A
c. Total Organic Carbon (TOC)	137	7465	Att5	Att5	Att5	Att5	2	mg/l	g	N/A	N/A	N/A	N/A
d. Total Suspended Solids (TSS)	34.0	3.35	12.56	0.703	7.20	0.403	115	mg/l	kg	N/A	N/A	N/A	N/A
e. Ammonia (as N)	29.0	2.85	17.80	0.997	16.13	0.903	115	mg/l	kg	N/A	N/A	N/A	N/A
f. Flow	VALUE	15,544	VALUE	15,057	VALUE	14,796	115	GPD	N/A	VALUE	N/A	VALUE	N/A
g. Temperature (winter)	VALUE	20.3	VALUE	29.2	VALUE	26.6	36	°C	°C	VALUE	N/A	VALUE	N/A
h. Temperature (summer)	VALUE	26.7	VALUE	29.3	VALUE	27.2	40	°C	°C	VALUE	N/A	VALUE	N/A
i. pH	MINIMUM	6.7	MAXIMUM	8.6	MINIMUM	6.7	MAXIMUM	8.6	STANDARD UNITS	115	STANDARD UNITS		

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

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM AVRG. VALUE		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-46-8)	X		20	1.97	10	0.564	115	mg/l	kg	N/A	N/A	N/A	N/A	
f. Nitrate-Nitrite (as N)	X		1691.00	166.42	611.60	34.25	115	mg/l	kg	N/A	N/A	N/A	N/A	

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)						
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
g. Nitrogen, Total Organic (as N)		X													
h. Oil and Grease		X													
i. Phosphorus (as P), Total (7723-14-0)		X													
j. Radioactivity															
(1) Alpha, Total	X		982	9.66E7	271	1.52E7	186.13	1.03E7	115	pCi/l	pCi	N/A	N/A	N/A	N/A
(2) Beta, Total	X		787	7.75E7	357	2.00E7	311.58	1.75E7	115	pCi/l	pCi	N/A	N/A	N/A	N/A
(3) Radium, Total		X													
(4) Radium 226, Total		X													
k. Sulfate (as SO ₄) (14808-79-8)	X		14300	779198	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
l. Sulfide (as S)	X		<0.025	1.351	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
m. Sulfite (as SO ₃) (14265-45-3)		X													
n. Surfactants	X		259.40	14.52	Att6	Att6	Att6	Att6	115	mg/l	kg	N/A	N/A	N/A	N/A
o. Aluminum, Total (7429-90-5)	X		2.450	133	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
p. Barium, Total (7440-39-3)		X													
q. Boron, Total (7440-42-8)		X													
r. Cobalt, Total (7440-48-4)		X													
s. Iron, Total (7439-89-6)	X		0.111	6.048	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
t. Magnesium, Total (7439-95-4)	X		0.561	30.569	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
u. Molybdenum, Total (7439-98-7)		X	Att6	Att6	Att6	Att6	Att6	Att6	Att6	Att6	Att6	N/A	N/A	N/A	N/A
v. Manganese, Total (7439-96-5)	X		0.008	0.460	Att6	Att6	Att6	Att6	2	mg/l	g	N/A	N/A	N/A	N/A
w. Tin, Total (7440-31-5)		X													
x. Titanium, Total (7440-32-8)		X													

EPA ID NUMBER (copy from Item 1 of Form 1) **OUTFALL NUMBER**
 TN0002038 **001**

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS				5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)		b. MAXIMUM 30 DAY VALUE (1)		c. LONG TERM AVRG. VALUE (1)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)		b. NO. OF ANALYSES		
				(2) MASS	(2) MASS	(2) MASS	(2) MASS	(2) MASS	(2) MASS								
METALS, CYANIDE AND TOTAL PHENOLS																	
1M. Antimony, Total (7440-36-0)	X			0.008	0.459	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
2M. Arsenic, Total (7440-38-2)	X			0.0250	14.042	Att7	Att7	Att7	Att7	4	mg/l	g	N/A	N/A	N/A		
3M. Barium, Total (7440-41-7)	X			0.0003	0.016	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
4M. Cadmium, Total (7440-43-9)	X			Att7	Att7	Att7	0.1049	0.0022	0.126	12	mg/l	g	N/A	N/A	N/A		
5M. Chromium, Total (7440-47-3)	X			Att7	Att7	Att7	0.0020	0.1177	0.0015	0.084	4	mg/l	g	N/A	N/A		
6M. Copper, Total (7440-50-8)	X			Att7	Att7	Att7	0.0135	0.7547	0.0073	0.409	12	mg/l	g	N/A	N/A		
7M. Lead, Total (7439-92-1)	X			Att7	Att7	Att7	0.0250	1.3976	0.0056	0.313	12	mg/l	g	N/A	N/A		
8M. Mercury, Total (7439-97-6)	X			0.0079	0.7775	Att7	0.0017	0.0952	0.0006	0.032	115	mg/l	g	N/A	N/A		
9M. Nickel, Total (7440-02-0)	X			Att7	Att7	Att7	0.0093	0.4960	0.0067	0.372	4	mg/l	g	N/A	N/A		
10M. Selenium, Total (782-49-2)	X			0.002	0.125	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
11M. Silver, Total (7440-22-4)	X			Att7	Att7	Att7	0.0100	0.5449	0.0053	0.286	12	mg/l	g	N/A	N/A		
12M. Thallium, Total (7440-28-0)	X			0.020	1.063	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
13M. Zinc, Total (7440-66-6)	X			Att7	Att7	Att7	0.0239	1.329	0.015	0.86	4	mg/l	g	N/A	N/A		
14M. Cyanide, Total (57-12-5)	X			0.136	7.411	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
15M. Phenols, Total	X			0.0010	0.0534	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A		
DIOXIN																	
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS													

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)		b. NO. OF ANALYSES			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION		b. MASS	a. LONG TERM AVERAGE VALUE	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS
1V. Acrolein (107-02-8)	X			0.0030	0.1635	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
2V. Acrylonitrile (107-13-1)	X			0.0063	0.3406	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
3V. Benzene (71-43-2)	X			0.0003	0.0163	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
4V. Bis (Chloromethyl) Ether (542-88-1)	X			0.0234	1.2751	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
5V. Bromoform (75-25-2)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
6V. Carbon Tetrachloride (56-23-5)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
7V. Chlorobenzene (108-90-7)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
8V. Chloro-bromomethane (124-48-1)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
9V. Chloroethane (75-00-3)	X			0.0005	0.0272	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
10V. 2-Chloro-ethylvinyl Ether (110-55-8)	X			0.0015	0.0817	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
11V. Chloroform (67-66-3)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
12V. Dichloro-bromomethane (75-27-4)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
13V. Dichloro-difluoromethane (75-71-8)	X			0.0005	0.0272	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
14V. 1,1-Dichloro-ethane (75-34-3)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
15V. 1,2-Dichloro-ethane (107-06-2)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
16V. 1,1-Dichloro-ethylene (75-35-4)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
17V. 1,2-Dichloropropane (78-87-5)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
18V. 1,3-Dichloropropane (542-75-6)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
19V. Ethylbenzene (100-41-4)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
20V. Methyl Bromide (74-83-9)	X			0.0005	0.0272	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
21V. Methyl Chloride (74-87-3)	X			0.0005	0.0272	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>						
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
22V. Methylene Chloride (75-09-2)		X		0.0005	0.0272	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A	
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
24V. Tetrachloroethylene (127-18-4)	X			Att7	Att7	0.0005	0.0265	0.0004	0.021	4	mg/l	g	N/A	N/A	N/A	
25V. Toluene (108-88-3)	X			0.0004	0.021	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A	
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			0.0003	0.0163	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
27V. 1,1,1-Trichloroethane (71-55-6)	X			0.0003	0.0163	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
28V. 1,1,2-Trichloroethane (79-00-5)	X			0.0003	0.0136	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
29V. Trichloroethylene (79-01-6)	X			0.0004	0.0196	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A	
30V. Trichlorofluoromethane (75-69-4)	X			0.0003	0.0169	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
31V. Vinyl Chloride (75-01-4)	X			0.0006	0.0300	Att7	Att7	Att7	Att7	2	mg/l	g	N/A	N/A	N/A	
GC/MS FRACTION - ACID COMPOUNDS																
1A. 2-Chlorophenol (95-57-9)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
2A. 2,4-Dichlorophenol (120-83-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
3A. 2,4-Dimethylphenol (105-67-9)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
5A. 2,4-Dinitrophenol (51-28-5)	X			0.0098	0.5340	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
6A. 2-Nitrophenol (88-75-5)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
7A. 4-Nitrophenol (100-02-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
8A. P-Chloro-M-Cresol (59-50-7)	X			0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
9A. Pentachlorophenol (87-86-5)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
10A. Phenol (108-95-2)	X			0.0010	0.0534	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	
11A. 2,4,6-Trichlorophenol (88-05-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A	

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. 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 ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
1B. Acenaphthene (83-32-9)	X			0.0003	0.0166	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
2B. Acenaphthylene (208-96-8)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
3B. Anthracene (120-12-7)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
4B. Benzidine (92-87-5)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
5B. Benzo (a) Anthracene (56-55-3)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
6B. Benzo (a) Pyrene (50-32-8)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
7B. 3,4-Benzofluoranthene (205-99-2)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
8B. Benzo (ghi) Perylene (191-24-2)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
9B. Benzo (k) Fluoranthene (207-08-9)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
10B. Bis (2-Chloro-ethyl) Methane (111-91-1)	X			0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
11B. Bis (2-Chloro-ethyl) Ether (111-44-4)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
15B. Butyl Benzyl Phthalate (85-88-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
16B. 2-Chloronaphthalene (91-58-7)	X			0.0003	0.0187	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
18B. Chrysene (218-01-9)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
19B. Dibenzo (a,h) Anthracene (53-70-3)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
20B. 1,2-Dichlorobenzene (95-50-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
21B. 1,3-Dichlorobenzene (94-173-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A

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1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
228. 1,4-Dichlorobenzene (106-46-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
238. 3,3-Dichlorobenzidine (91-94-1)	X			0.0010	0.0534	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
248. Diethyl Phthalate (84-66-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
258. Dimethyl Phthalate (131-11-3)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
268. Di-N-Buyl Phthalate (84-74-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
278. 2,4-Dinitrotoluene (121-14-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
288. 2,6-Dinitrotoluene (606-20-2)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
298. Di-N-Octyl Phthalate (117-84-0)	X			0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
308. 1,2-Dibenzoylhydrazine (as Azobenzene) (122-66-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
318. Fluoranthene (206-44-0)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
328. Fluorene (86-73-7)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
338. Hexachlorobenzene (118-74-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
348. Hexachlorobutadiene (87-66-3)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
358. Hexachlorocyclopentadiene (174-47-4)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
368. Hexachloroethane (61-72-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
378. Indeno (1,2,3-cd) Pyrene (193-39-5)	X			0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
388. Isophorone (78-59-1)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
398. Naphthalene (91-20-3)	X			0.0003	0.0160	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
408. Nitrobenzene (98-95-3)	X			0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
418. N-Nitrosodimethylaniline (62-75-9)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
428. N-Nitrosodipropylamine (621-64-7)	X			0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT						4. UNITS		5. INTAKE (optimal)						
		a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	b. MAXIMUM 30 DAY VALUE (1) (if available)	c. LONG TERM AVG. VALUE (1) (if available)	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	b. NO. OF ANALYSES				
GC/MS FRACTION - BASENEUTRAL COMPOUNDS (continued)																
43B. N-Nitro-sodiphenylamine (86-30-6)	X				0.0029	0.1602	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
44B. Phenanthrene (83-01-8)	X				0.0002	0.0107	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
45B. Pyrene (129-00-0)	X				0.0010	0.0534	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
46B. 1,2,4-Trichlorobenzene (120-82-1)	X				0.0020	0.1068	Att7	Att7	Att7	Att7	1	mg/l	g	N/A	N/A	N/A
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 (38-89-9)				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												

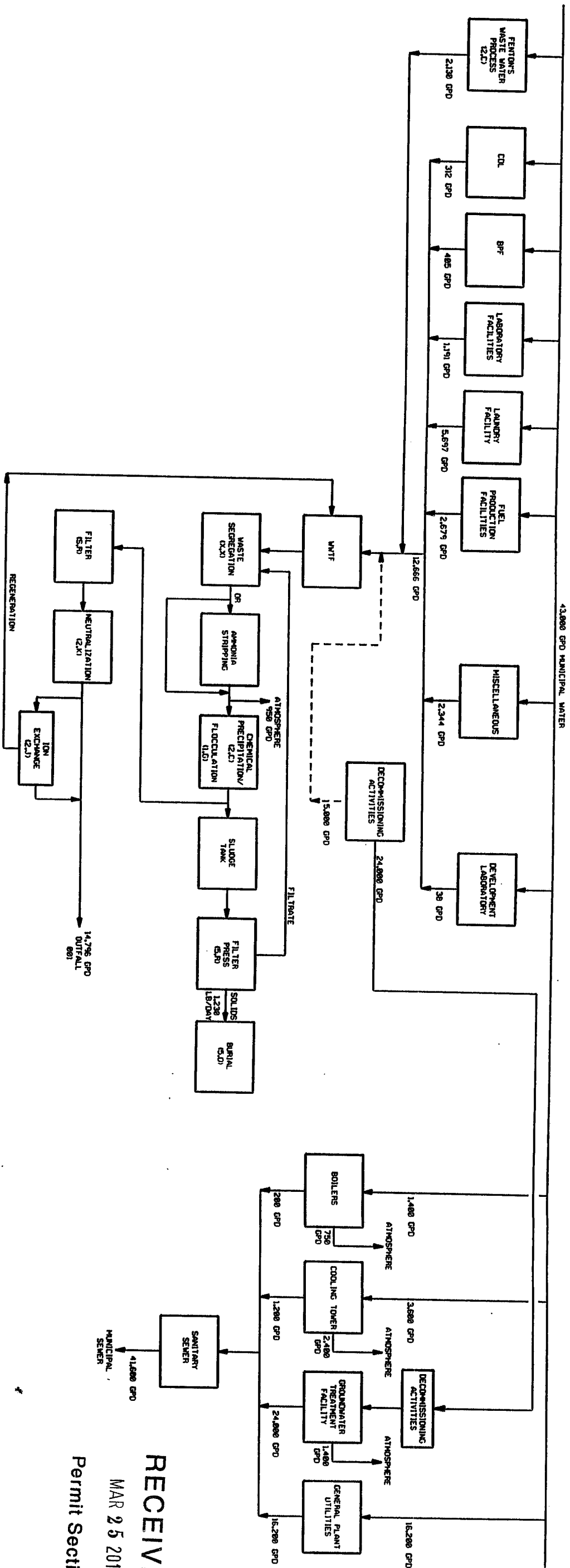
CONTINUED FROM PAGE V-8

EPA ID NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
TN0002038	001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)				
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) (if available)	(2) MASS	c. LONG TERM AVRG. VALUE (1) (if available)	(2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	(2) MASS	b. NO. OF ANALYSES	
17P. Heptachlor Epoxide (1024-57-3)			X													
18P. PCB-1242 (63469-21-9)			X													
19P. PCB-1254 (11097-69-1)			X													
20P. PCB-1221 (11104-28-2)			X													
21P. PCB-1232 (11141-16-5)			X													
22P. PCB-1248 (12672-29-6)			X													
23P. PCB-1260 (11096-82-5)			X													
24P. PCB-1016 (12674-11-2)			X													
25P. Toxaphene (8001-35-2)			X													

**ATTACHMENT 4
FORM 2C
Section II, Part A**

Water Flow Schematic



RECEIVED
MAR 25 2010
Permit Section

LEGEND
----- ALTERNATE WATER SUPPLY
- - - - - ALTERNATE TREATMENT PATH

THIS DRAWING RELEASED FOR:
SIGNATURE/DATE

 CONSTRUCTION
 INFORMATION ONLY
 BID
 PURCHASE/FAE

NO.	DATE	REVISION	BY	LET
0	02-22-05	UPDATED PER ECR-20100258	JMG	C
1	09-23-99	AS-BUILT	JG	C
2	08-30-95	ORIGINAL ISSUE	JG	B

TOLERANCE UNLESS SPECIFIED	ANGULAR	DECIMAL
FRACTIONAL ± 1/16"	± 1/2°	XX ± .01
DECIMAL ± .001		XXX ± .001

NUCLEAR FUEL SERVICES, INC.
ERWIN, TENNESSEE

NPDES WATER FLOW SCHEMATIC

OWNER: TE BEVINS
SCALE: NONE
DATE: 02-08-10

DRAWING NO. **011-F0029-B**

CONFIGURATION CONTROL YES NO

**ATTACHMENT 4 A
FORM 2C
Section II, Part A**

Detailed Water Flow Schematic Descriptions

NFS uses a flexible wastewater batch treatment process which allows it to insure full treatment to its wastewater, while avoiding unneeded treatment. This is achieved through a three component wastewater treatment process for wastewater which is discharged under the terms of NFS' NPDES permit. The three components are: the Wastewater Treatment Facility, Decommissioning Wastewater, and the Fenton's Waste Water Treatment Process. Each component is briefly described below, including a description of the sources of their influent wastewater. Table 4A at the end summarizes the various combinations of flow that can result. The Attachment 4 Wastewater Flow Schematic depicts each component.

1. Waste Water Treatment Facility

The central feature of NFS' direct discharge wastewater treatment system is its physical/chemical Waste Water Treatment Facility (WWTF) which is depicted on the flow schematic. The batch treatment system is controlled by trained operators who characterize the incoming wastewater and select the appropriate unit treatment operations that are available in the WWTF to insure that each batch complies with the permit requirements before it is discharged. All 001 wastewater is treated in the WWTF before it is discharged. Except during full plant shut downs, some of the sources described below are discharging wastewater to the influent of the WWTF on a daily basis. It is impossible to predict more than a couple of days in advance what wastewater will be generated and discharged to the WWTF that day.

Most process-related wastewater is only subjected to treatment at the WWTF. The sources of WWTF influent are described below, and are deemed the source of the WWTF "Base Flow" in Table 4A below.

Description of Operations Laboratory Facilities

These facilities conduct wet chemical, physical testing and instrumental analyses of materials which supports production, and also NPDES related compliance analyses. In addition, research and development, engineering and process evaluations as well as various treatability studies are performed to evaluate the feasibility of potential new business ventures and to support environmental remediation efforts.

Laundry Facilities

The laundry facilities launder and decontaminate (if necessary) process related worker clothing.

Fuel Production Facilities

These facilities utilize highly-enriched and/or natural uranium, to produce classified products. Production rates are highly variable. The facilities are divided into three (3) divisions: Naval Fuel, Blended Low Enriched Uranium Preparation Facility (BLEU) and Commercial Development Line (CDL).

Uranium Recovery

These facilities conduct production/production support operations which recover low-enriched and high-enriched uranium from materials generated on-site or by customers. Blending of enriched liquid uranium nitrate hexahydrate can also occur. Production rates are highly variable.

Air Pollution Control Equipment

All of the above facilities, except for the laundry, discharge scrubber water from air pollution control equipment.

Miscellaneous

Various sources of non-routine wastewater may be treated at the WWTF. Examples of non-routine wastewater are clean-up of chemical spills, and wash and rinse water from characterization projects. This water is treated through the normal wastewater treatment process.

2. Decommissioning Activities

During the upcoming NPDES renewal term, NFS will continue to decommission many of its former structures, solid waste management units, land burial facility, equipment, buildings, etc. at its site. In the past, wastewater produced by some of these activities has been discharged directly to the WWTF. As shown in the schematic however, during the upcoming NPDES renewal permit term it is expected that the majority of the decommissioning related wastewater will be handled through the existing Groundwater Treatment Facility with subsequent discharge to the Erwin Publicly Owned Wastewater Treatment Plant (Erwin POTW). NFS still retains the flexibility to discharge decommissioning wastewater through its wastewater treatment facility and NPDES Outfall 001. This discharge route would be a secondary back-up route for this waste stream. When decommissioning wastewater is discharged to the WWTF, it will be the

predominant source of wastewater in the WWTF influent. It will be blended in with other wastewater being generated at that time.

3. Fenton's Waste Water Process

The Fenton's process treats waste water high in organic compounds, such as Chemical Oxygen Demand (COD). As depicted on the diagram, physical and chemical operations are used to remove COD.

5. Flow Estimates

The flow estimates provided on the schematic are based on the projected year 2009 Long-Term Average (LTA) flow discharge for each outfall. It is possible that during the renewal permit term the monthly average and Long-Term Average flow rates will increase above these currently estimated projections. If necessary (either under the terms of the permit or, if, in the judgment of NFS a permit modification is deemed necessary), NFS will so notify the State of Tennessee, Division of Water Pollution Control.

The maximum hydraulic capacity of the wastewater treatment system (0.026 MGD) will not be exceeded. Because of the variable number of batches which will be treated on a daily basis and the highly variable contents of these batches (i.e. any combination of wastes from the above sources which, in the judgment of NFS' WWTF operators, can be successfully treated by the WWTF), as with the current permit, no average mass limits are appropriate.

Table 4A below summarizes the six (6) possible combinations of WWTF influent flows and estimates the projected maximum Long Term Average flow that the WWTF could receive.

Table 4A
Potential Influent Combinations of Wastewater
And Projected Maximum LTA Flow rates

Scenario	Base Flow ^a	Fentons ^b	BPF ^c	CDL ^d	Decommissioning ^e	Maximum LTA Flow ^f (GPD)
1. Base Flow (BF) only	X					11949
2. BF + F	X	X				14079
3. BF +BPF	X	X	X			12354
4. BF + CDL	X			X		12261
5. BF+DA	X				X	16949
6. BF+F+BPF+CDL+DA	X	X	X	X	X	19796

NOTES

- a. BF: Base Flow
The base flows are those listed above under WWTF. The majority of these flows are episodic in nature and dependent on NFS' highly variable production and decommissioning processes.
- b. F: Fenton
The Fenton's Waste Water Treatment Process is dependent upon high COD wastewater.
- c. BPF: BLEU Blended Low Enriched Uranium Preparation Facility
- d. CDL: Commercial Development Line
- e. DA: Decommissioning Activities
As explained above, it is anticipated that during the upcoming renewal permit term, this flow should normally not be discharged to the WWTF. However, if there is a problem at the Groundwater Treatment Facility (such as an equipment malfunction) this flow would be diverted to the WWTF where it has been successfully treated in the past. The frequency of these discharges is expected to be low. When they do occur however, they could be of extended duration, depending on the nature of the problem which triggered the diversion and the time it takes to correct the problem.
- f. While the maximum daily base flow can, and has been measured and reported in the DMRs, those reported flows reflect different decommissioning activities than will be on-going during the upcoming permit term. The maximum projected Long term Average flows depicted in this table are based upon a summation of each of NFS' best professional judgment as to the year 2009 LTAs for each of the three major flow components. It is not a daily maximum flow figure. The best daily maximum flow estimate is based upon the design maximum daily capacity of the WWTF: 26,000 GPD.

**ATTACHMENT 5
FORM 2C
Section V, Part A
Outfall 001**

1. The BOD and TOC data used in this permit submittal are from the year 2005. The 2005 data is submitted because representative samples could not be collected due to a work stoppage. When production restarts, BOD and TOC samples will be collected and the data will be forwarded to the State of Tennessee.

Because BOD and TOC are not required to be monitored in the current permit, the Maximum Daily Value represented in this form is the maximum value of two (2) WWTF batch grab samples collected in January 2005 (see Appendix 5-1 and Appendix 5-2).

2. The COD, TSS, Ammonia, Flow, Temperature, and pH data represents analytical data from 2009.
3. The Maximum Daily Summer Temperature is derived from wastewater treatment facility batches dated: Jun. 2009 – Sep. 2009. The Maximum Daily Winter Temperature is derived from wastewater treatment facility batches dated: Dec. 2009 – Mar. 2009.

APPENDIX 5-1

2005 BOD Sampling*

Batch No./ Date	BOD		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	136	7411	13385
05-008, 01/18/05	62	3389	6122
Total	198	10800	19506
Avg	99	5400	9753

Notes:

* 2005 data is being used until production resumes

Avg Mass - estimated using year 2003-2004 LTA of 14,395 GPD

Max Mass - calculated using the established WWTF Maximum flow rate of 26,000 GPD.

APPENDIX 5-2

2005 TOC Sampling*

Batch No./ Date	TOC		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	40	2196	3966
05-008, 01/18/05	137	7465	13483
Total	177	9661	17449
Avg	89	4830	8725

Notes:

* 2005 data is being used until production resumes

Avg Mass - Average mass calculated using the 2003-2004 LTA of 14,395 GPD

Max Mass - Maximum mass calculated using the established WWTF Maximum flow rate of 26,000 GPD.

ATTACHMENT 5 A
FORM 2C
Section III, Part A
NFS SIC Code Classification

Even though NFS is classified as a SIC Code 2819 (Inorganic Chemicals, Not Elsewhere Classified) establishment, it is not subject to 40 CFR Part 415 (categorical standards for the "Inorganic Chemicals Manufacturing Point Source" category). This basis for this determination is found in two Development Documents published by EPA for the Inorganic Chemicals Point Source Category, a "Phase I" document in 1982 and a Phase II document in 1984.

A review of these documents, mainly the Phase II document, it clearly establishes that the NFS facility is not covered by 40 CFR Part 415.

1. The Inorganic Chemical manufacturing category was one of the 21 point source categories that EPA agreed to issue categorical standards for as a part of the settlement of a citizen suit (NRDC v. Train, 8 ERC 2120 (D.D.C. 1976 as subsequently modified)).
2. The NRDC settlement agreement also specifically identified which SIC codes that EPA had to address in its rulemaking. SIC Code 2819 was listed. In its Phase I Inorganic Chemicals rulemaking, EPA addressed 60 of the 184 potential types of inorganic chemical manufacturing groups. In its Phase II Inorganic Chemical Rulemaking, EPA evaluated the remaining 124 potential subcategories. Based on this evaluation, 24 received (sub)categorical standards while 107 were excluded from categorical regulation based upon criteria set forth in the NRDC Settlement Agreement.
3. While SIC Code 2819 includes "...nuclear cores – inorganic, nuclear fuel reactor cores-inorganic and nuclear fuel scrap reprocessing...", EPA later excluded all of these potential subcategories from Part 415 "since [a]ny materials in the wastewater are source material as these terms are defined in the Atomic Energy Act of 1954, as amended." The Supreme Court decided, in Train v. Colorado PIRG, 426 U.S.I. (1976), that these materials, at least when regulated by the NRC, are not "pollutants" under the Clean Water Act." (See Phase II Development Document at 490.)

**ATTACHMENT 6
FORM 2C
Section V, Part B
Outfall 001**

1. The total chlorine residual, sulfate (as SO₃), sulfide (as S), total aluminum, total iron, total magnesium, and total manganese data is from 2005 data. The 2005 data was used because representative samples could not be collected due to a work stoppage. When production restarts these attributes will be sampled for and the data will be forwarded to the State of Tennessee.

Because monitoring is not required under the current permit, the Maximum Daily Values used in this application for total chlorine residual, sulfate (as SO₃), sulfide (as S), total aluminum, total iron, total magnesium, and total manganese are based upon the maximum analytical values of the following two (2) WWTF grab sample batches collected in January 2005:

<u>Batch No.</u>	<u>Date</u>
05-001	01/05/05
05-008	01/18/05

Appendices 6-1 through 6-6 summarize the data for each of the above parameters.

2. Fluoride, nitrate-nitrite (as N), total alpha and total beta values are derived from 2009 analytical data.
4. Maximum mass values were calculated using the established WWTF maximum flow rate of 26,000 GPD.
5. Chemical oxygen demand data is used as a measure of surfactant or organic matter in NFS effluent.
6. Molybdenum at NFS is only present as the result of corrosion in metal piping. No significant corrosion is present in processes that discharge to the WWTF.

APPENDIX 6-1

2005 Sulfate Sampling*

Batch No./ Date	Sulfate		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	5070	276261	498978
05-008, 01/18/05	14300	779198	1407374
Total	19370	1055459	1906352
Avg	9685	527729	953176

Notes:

*** 2005 data is being used until production resumes**

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

APPENDIX 6-2

2005 Sulfide Sampling*

Batch No./ Date	Sulfide			
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)	
05-001, 01/05/05	<	0.025	1.351	2.441
05-008, 01/18/05	<	0.025	1.351	2.441
Total	U	0.050	2.703	4.882
Avg	U	0.025	1.351	2.441

Notes:

*** 2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits for sulfide 0.0248mg/l

U - Indicates the target analyte was analyzed for but not detected above the detection limit.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations are probably lower.

Avg Mass - estimated using year 2003 - 2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

APPENDIX 6-3

2005 Aluminum Sampling*

Batch No./ Date	Aluminum		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	2.450	133	241
05-008, 01/18/05	2.350	128	231
Total	4.800	262	472
Avg	2.400	131	236

Notes:

*** 2005 data is being used until production resumes**

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

APPENDIX 6-4

2005 Iron Sampling*

Batch No./ Date	Iron		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	0.043	2.354	4.252
05-008, 01/18/05	0.111	6.048	10.924
Total	0.154	8.402	15.176
Avg	0.077	4.201	7.588

Notes:

*** 2005 data is being used until production resumes**

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

Appendix 6-5

2005 Magnesium Sampling*

Batch No./ Date	Magnesium		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	0.154	8.391	15.156
05-008, 01/18/05	0.561	30.569	55.212
Total	0.715	38.960	70.369
Avg	0.358	19.480	35.184

Notes:

* 2005 data is being used until production resumes

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

Appendix 6-6

2005 Manganese Sampling*

Batch No./ Date	Manganese		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	J 0.002	0.116	0.209
05-008, 01/18/05	J 0.008	0.460	0.832
Total	J 0.011	0.576	1.040
Avg	J 0.005	0.288	0.520

Notes:

*** 2005 data is being used until production resumes**

The quantitation limits for manganese 0.0003 mg/l

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average, the nondetect values were calculated as being at the quantitative limit, actually the values are probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

**ATTACHMENT 7
FORM 2C
Section V, Part C
Outfall 001**

1. The zinc data in this section represents 2003-2004 data. The following attribute data is 2005 data: antimony, beryllium, selenium, thallium, cyanide, toluene, and vinyl chloride. The use of the 2003-2005 data is because representative samples could not be collected due to a work stoppage. When the production process restarts, representative samples will be collected and the data will be forwarded to the State of Tennessee.

2. Because monitoring is not required under the current permit, the Maximum Daily Values used in this application for total antimony, total beryllium, total selenium, total thallium, total cyanide, total phenols, methylene chloride, toluene, trichloroethylene, and vinyl chloride are based upon the maximum analytical values of the following two (2) WWTF grab sample batches collected in January 2005:

<u>Batch No.</u>	<u>Date</u>
05-001	01/05/05
05-008	01/18/05

Appendices 7-1 through 7-18 summarize the data for each of the above parameters.

3. Maximum mass values were calculated using the established WWTF maximum flow rate of 26,000 GPD.

APPENDIX 7-1

2005 Antimony Sampling*

Batch No./ Date	Antimony		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	J 0.008	0.459	0.829
05-008, 01/18/05	J 0.004	0.192	0.346
Total	J 0.012	0.651	1.175
Avg	J 0.006	0.325	0.588

Notes:

***2005 data is being used until production resumes**

The quantitation limits for antimony 0.002 mg/l

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit, the actual concentrations were probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

**Appendix 7-2
2009 Quarterly Metals Data**

2009 Arsenic

Quarter	Results		QL (mg/l)	Avg. Quarterly Flow (gal/day)
	(mg/l)	(g)		
1st	0.0172	1.0120	0.0500	15544
2nd	< 0.0050	0.2755	0.0500	14557
3rd	< 0.0500	2.6751	0.05	14134
4th	< 0.2500	14.0425	0.2500	14839
Total	J 0.3222	18.0051		59074
Avg.	J 0.0806	4.5013		14769

2009 Chromium

Quarter	Results		QL (mg/L)	Avg. Quarterly Flow (gal/day)
	(mg/l)	(g)		
1st	< 0.0020	0.1177	0.0020	15544
2nd	< 0.0020	0.1102	0.0002	14557
3rd	< 0.0010	0.0535	0.0010	14134
4th	< 0.0010	0.0562	0.0010	14839
Total	J 0.0060	0.3376		59074
Avg.	J 0.0015	0.0844		14769

2009 Nickel

Quarter	Results		QL (mg/l)	Avg. Quarterly Flow (gal/day)
	(mg/l)	(g)		
1st	0.0073	0.4319	0.0010	15544
2nd	J 0.0041	0.2237	0.0010	14557
3rd	0.0093	0.4960	0.0015	14134
4th	0.0060	0.3365	0.0015	14839
Total	J 0.0267	1.4880		59074
Avg.	J 0.0067	0.3720		14769

Notes:

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average, the nondetect values were calculated as being at the quantitation limit the actual concentrations were probably lower.

QL - Quantitation Limit

The contract laboratory reported only the IDL not its quantitation level.

The quantitation levels used on this form were calculated by multiplying the IDL by 10, an is the limit of quantitation (see 18th Edition Standard Methods for the Examination of Water and Wastewater, 1992). Where the laboratory reported non-oetects or "less than" values, the quantitation level was used.

Appendix 7-3

2005 Beryllium Sampling*

Batch No./ Date	Beryllium		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	J 0.0003	0.016	0.028
05-008, 01/18/05	< 0.0002	0.009	0.017
Total	J 0.0005	0.0250	0.0451
Avg	J 0.0002	0.0125	0.0225

Notes:

***2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits (mg/l) for beryllium 0.000172 mg/l

U - Indicates the target analyte was analyzed for but not detected above the detection limit.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations are probably lower.

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit, the actual concentrations were probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Attachment 7-4

2009 Cadmium Sampling

Month	Maximum		IDL (mg/l)	QL (mg/l)	Average Flow (GPD)	
	Concentration (mg/l)	Mass (g/day)				
Jan-09	<U	0.0010	0.0567	0.0010	0.0100	14976
Feb-09	<U	0.0010	0.0569	0.0010	0.0100	15040
Mar-09	<U	0.0010	0.0569	0.0010	0.0100	15022
Apr-09	J	0.0015	0.0816	0.0010	0.0100	14870
May-09	J	0.0015	0.0878	0.0010	0.0100	15057
Jun-09	J	0.0010	0.0592	0.0001	0.0100	15040
Jul-09	J	0.0020	0.1070	0.0001	0.0100	14420
Aug-09	<U	0.0010	0.0560	0.0010	0.0100	14788
Sep-09	<U	0.0010	0.0551	0.0010	0.0100	14557
Oct-09	<U	0.0010	0.0555	0.0010	0.0100	14668
Nov-09	<U	0.0010	0.0554	0.0010	0.0100	14627
Dec-09	J	0.0013	0.0735	0.0010	0.0100	14486
Total	J	0.0143	0.8015			177551
Avg	J	0.0012	0.0668			14796

Notes:

< - Below the instrument detection limit (0.0025 mg/l)

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit, the actual concentrations were probably lower.

IDL - Instrument Detection Limit

QL - Quantitation Limit

The contract laboratory reported only the IDL not its quantitation level.

The quantitation levels used on this form were calculated by multiplying the IDL by 10, and is the limit of quantitation (see 18th Edition Standard Methods for the Examination of Water and Wastewater, 1992). Where the laboratory reported non-detects or "less than" values, the quantitation level was used.

Appendix 7-5

2009 Copper Sampling

Month	Maximum		IDL (mg/l)	QL (mg/l)	Average Flow (GPD)	
	Concentration (mg/l)	Mass (g/day)				
Jan-09	J	0.0073	0.4072	0.0030	0.0300	14839
Feb-09	J	0.0044	0.2525	0.0030	0.0300	15192
Mar-09	<	0.0061	0.3382	0.0030	0.0300	14769
Apr-09	<	0.0034	0.1873	0.0030	0.0300	14557
May-09		0.0135	0.7547	0.0030	0.0300	14769
Jun-09	J	0.0060	0.3167	0.0030	0.0300	13923
Jul-09		0.0117	0.6260	0.0030	0.0300	14134
Aug-09	J	0.0072	0.4138	0.0030	0.0300	15121
Sep-09	J	0.0031	0.1738	0.0030	0.0300	15050
Oct-09	J	0.0090	0.5055	0.0030	0.0300	14839
Nov-09	J	0.0072	0.4055	0.0030	0.0300	14839
Dec-09	J	0.0088	0.5201	0.0030	0.0300	15544
Total	J	0.0876	4.9015			177576
Avg	J	0.0073	0.4085			14798

Notes:

< - Below the instrument detection limit (0.0025 mg/l)

IDL - Instrument Detection Limit

QL - Quantitation Limit

The contract laboratory reported only the IDL not its quantitation level.

The quantitation levels used on this form were calculated by multiplying the IDL by 10, an is the limit of quantitation (see 18th Edition Standard Methods for the Examination of Water and Wastewater, 1992).

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit the actual concentrations were probably lower.

Appendix 7-6
2009 Lead Sampling

Month	Maximum		IDL (mg/l)	QL (mg/l)	Average Flow (GPD)	
	Concentration (mg/l)	Mass (g/day)				
Jan-09	<U	0.0025	0.1404	0.0025	0.0250	14839
Feb-09	<U	0.0025	0.1438	0.0025	0.0250	15192
Mar-09	<U	0.0250	1.3976	0.0250	0.2500	14769
Apr-09	<U	0.0125	0.6888	0.0125	0.1250	14557
May-09	<U	0.0025	0.1398	0.0025	0.0250	14769
Jun-09	<U	0.0025	0.1318	0.0025	0.0250	13923
Jul-09	<U	0.0033	0.1766	0.0033	0.0330	14134
Aug-09	<U	0.0033	0.1889	0.0033	0.0330	15121
Sep-09	<U	0.0033	0.1880	0.0033	0.0330	15050
Oct-09	<U	0.0033	0.1854	0.0033	0.0330	14839
Nov-09	<U	0.0033	0.1854	0.0033	0.0330	14839
Dec-09	<U	0.0033	0.1942	0.0033	0.0330	15544
Total	J	0.0673	J 3.7604			177576
Avg	J	0.0056	J 0.3134			14798

Notes:

< - Below the instrument detection limit

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit, the actual concentrations were probably lower.

IDL - Instrument Detection Limit

QL - Quantitation Limit

The contract laboratory reported only the IDL not its quantitation limit.

The quantitation levels used on this form were calculated by multiplying the IDL by 10, an is the limit of quantitation (see 18th Edition Standard Methods for the Examination of Water and Wastewater, 1992). Where the laboratory reported non-detects or "less than" values, the quantitation level was used.

APPENDIX 7-7

2005 Selenium Sampling*

Batch No./ Date	Selenium		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (mg/l)
05-001, 01/05/05	< 0.0023	0.1248	0.2254
05-008, 01/18/05	< 0.0023	0.1248	0.2254
Total	U 0.0046	0.2496	0.451
Avg	U 0.0023	0.1248	0.225

Notes:

***2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits for selenium 0.0023 mg/l

U - Indicates the target analyte was analyzed for but not detected above the detection limit.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations are probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF maximum flow rate of 26,000 GPD.

Appendix 7-8
2009 Silver Sampling

Month	Maximum		IDL (mg/l)	QL (mg/l)	Average Flow (GPD)	
	Concentration (mg/l)	Mass (g/day)				
Jan-09	<U	0.0050	0.27245	0.0050	0.05000	14839
Feb-09	<U	0.0050	0.27245	0.00500	0.05000	15192
Mar-09	<U	0.0010	0.05449	0.00100	0.01000	14769
Apr-09	<U	0.0010	0.05449	0.00100	0.01000	14557
May-09	<U	0.0010	0.05449	0.00100	0.01000	14769
Jun-09	<U	0.0050	0.27245	0.00500	0.05000	13923
Jul-09	<U	0.0100	0.54489	0.01000	0.10000	14134
Aug-09	<U	0.0100	0.54489	0.01000	0.10000	15121
Sep-09	<U	0.0050	0.27245	0.00500	0.05000	15050
Oct-09	<U	0.0100	0.54489	0.01000	0.10000	14839
Nov-09	<U	0.0050	0.27245	0.00500	0.05000	14839
Dec-09	<U	0.0050	0.27245	0.00500	0.05000	15544
Total	J	0.0630	J 3.43283			177576
Avg	J	0.0053	J 0.28607			14798

NOTES:

< - Below instrument detection limit (0.0015 mg/l)

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects. quantitation limit, the actual concentrations were probably lower.

IDL - Instrument Detection Limit

QL - Quantitation Limit

and is limit of quantitation (see 18th Edition Standard Methods for the Examination of

Average Mass - estimated using year 2009 LTA of 14,798 GPD.

APPENDIX 7-9

2005 Thallium Sampling*

Batch No./ Date	Thallium			
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)	
05-001, 01/05/05	<	0.010	0.545	0.984
05-008, 01/18/05		0.020	1.063	1.919
Total	J	0.030	1.607	2.903
Avg	J	0.015	0.804	1.452

Notes:

***2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits for thallium 0.01 mg/l

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations were probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

APPENDIX 7-10

2005 Cyanide Sampling*

Batch No./ Date	Cyanide		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	0.054	2.932	5.295
05-008, 01/18/05	0.136	7.411	13.385
Total	0.190	10.342	18.680
Avg	0.095	5.171	9.340

Notes:

***2005 data is being used until production resumes**

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Appendix 7-11

2003-2004 Zinc Sampling*

Quarter	Results		QL	Avg. Quarterly Flow
	(mg/l)	(g)	(mg/l)	(gal/day)
4th 2003	0.0080	0.4244	0.0050	13964
1st 2004	0.01928	1.0997	0.0050	12156
2nd 2004	0.0239	1.3292	0.0500	14692
3rd 2004	0.0101	0.5845	0.0050	15288
Total	0.0613	3.4378		56100
Avg.	0.0153	0.8595		14025

Notes:

J - The associated numerical value is an estimated quantity, which consists of detects and nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitation limit the actual concentrations were probably lower.

QL - Quantitation Limit

APPENDIX 7-12

2005 Toluene Sampling*

Batch No./ Date	Toluene		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	< 0.0004	0.021	0.038
05-008, 01/18/05	< 0.0004	0.021	0.038
Total	U 0.0008	0.043	0.077
Avg	U 0.0004	0.021	0.038

Notes:

***2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits for toluene 0.0004 mg/l

U - Indicates the target analyte was analyzed for but not detected above the detection limit.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations are probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Appendix 7-13

2009 Tetrachloroethylene Sampling

Quarter	Results		QL (mg/l)	Avg. Quarterly Flow (gal/day)	
	(mg/l)	(g)			
1st Qrt.	<U	0.0005	0.0265	0.0045	15544
2nd Qrt.	<U	0.0005	0.0248	0.0045	14557
3rd Qrt.	<U	0.0003	0.0161	0.0030	14134
4th Qrt.	<U	0.0003	0.0169	0.0030	14839
Total	J	0.0015	0.0842		59074
Avg.	J	0.0004	0.0210		14769

NOTES:

< - Below Quantitation Limits (mg/l)

The quantitation limits for vinyl chloride 0.0001 mg/l

J - The associated numerical value is an estimated quantity, which consists of nondetects.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations were probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

QL - Quantitation Limit

The contract laboratory reported only the IDL not its quantitation limit.

The quantitation levels used on this form were calculated by multiplying the IDL by 10, an is the limit of quantitation (see 18th Edition Standard Methods for the Examination of Water and Wastewater, 1992). Where the laboratory reported non-detects or "less than" values, the quantitation level was used.

APPENDIX 7-14

2005 Vinyl Chloride Sampling*

Batch No./ Date	Vinyl Chloride		
	Concentration (mg/l)	Avg. Mass (g/day)	Max Mass (g/day)
05-001, 01/05/05	< 0.0006	0.0300	0.0541
05-001, 01/18/05	< 0.0006	0.0300	0.0541
Total	U 0.0011	0.0599	0.1083
Avg	U 0.0006	0.0300	0.0541

Notes:

***2005 data is being used until production resumes**

< - Below Quantitation Limits (mg/l)

The quantitation limits for vinyl chloride 0.0006 mg/l

U - Indicates the target analyte was analyzed for but not detected above the detection limit.

For purposes of the average the nondetect values were calculated as being at the quantitative limit, the actual concentrations are probably lower.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Attachment 7-15

**GC/MS Volatile Compounds*
Batch 06-010/Date 1/23/06**

Compound	Concentration (mg/l)	Avg. Mass	Max Mass
		(g/day)	(g/day)
Acrolein	<	0.0030	0.2953
Acrylonitrille	<	0.0063	0.6151
Benzene	<	0.0003	0.0295
Bis(Chloromethyl)Ether	<**	0.0234	2.3030
Bromoform	<	0.0003	0.0246
Carbon Tetrachloride	<	0.0003	0.0246
Chlorobenzene	<	0.0003	0.0246
Chlorodibromomethane	<	0.0003	0.0246
Chloroethane	<	0.0005	0.0492
2-Chloroethylvinyl Ether	<	0.0015	0.1476
Chloroform	<	0.0003	0.0246
Dichlorobromoethane	<	0.0003	0.0246
Dichlorodifluoromethane	<	0.0005	0.0492
1,1-Dichloroethane	<	0.0003	0.0295
1,2-Dichloroethane	<	0.0003	0.0246
1,1-Dichloroethylene	<	0.0003	0.0295
1,2-Dichloropropane	<	0.0003	0.0246
1,3-Dichloropropylene	<	0.0003	0.0246
Ethylbenzene	<	0.0003	0.0246
Methyl Bromide	<	0.0005	0.0492
Methylene Chloride	<	0.0005	0.0492
1,1,2,2-Tetra Chloroethane	<	0.0003	0.0246
1,2-Trans Dichloroethylene	<	0.0003	0.0295
1,1,1-Trichloroethane	<	0.0003	0.0295
1,1,2-Trichloroethane	<	0.0003	0.0246
Trichlorofluoromethane	<	0.0003	0.0305

Notes:

***2006 data is being used until production resumes**

** - Bis(chloromethyl)Ether was not identified in the Tentatively Identified Compound (TIC) Search,

< - Below Quantitation Limits (mg/l). The Quantitation Limit is the value reported.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Attachment 7-16

GC/MS Fraction - Acid Compounds*
Batch 06-010/Date 1/23/06

Compound	Concentration (mg/l)	Avg. Mass	Max Mass
		(g/day)	(g/day)
2-Chlorophenol	<	0.0020	0.1929
2,4-Dichlorophenol	<	0.0020	0.1929
2,4-Dimethylphenol	<	0.0020	0.1929
4,6-Dinitro-O-Cresol	<	0.0029	0.2893
2,4-Dinitrophenol	<	0.0098	0.9645
2-Nitrophenol	<	0.0020	0.1929
4-Nitrophenol	<	0.0020	0.1929
P-Chloro-M-Cresol	<	0.0029	0.2893
Pentachlorophenol	<	0.0020	0.1929
Phenol	<	0.0010	0.0964
2,4,6-Trichlorophenol	<	0.0020	0.1929

Notes:

***2006 data is being used until production resumes**

< - Below Quantitation Limits (mg/l). The Quantitation Limit is the value reported.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.

Attachment 7-17
GC/MS Fraction - Base/Neutral Compounds*
WWTF Batch 06-010/Date 1/23/06

Compound	Concentration (mg/l)	Avg. Mass	Max Mass
		(g/day)	(g/day)
Acenphthene	<	0.0003	0.0166
Acenaphtylene	<	0.0002	0.0107
Anthracene	<	0.0002	0.0107
Benzidine	<	0.0020	0.1068
Benzo (a) Anthracene	<	0.0002	0.0107
Benzo (a) Pyrene	<	0.0002	0.0107
3,4-Benzofluoranthene	<	0.0002	0.0107
Benzo (ghi) Perylene	<	0.0002	0.0107
Benzo (k) Fluoranthene	<	0.0002	0.0107
Bis (2-Chloroethoxy) Methane	<	0.0029	0.1602
Bis (2-Chloroethyl) Ether	<	0.0020	0.1068
Bis (2-Chloroisopropyl) Ether	<	0.0020	0.1068
Bis (2-Ethylhexyl) Phthalate	<	0.0020	0.1068
4-Bromophenyl Phenyl	<	0.0020	0.1068
Butyl Benzyl Phthalate	<	0.0020	0.1068
2-Chloronaphthalene	<	0.0003	0.0187
4-Chlorophenyl Phenyl-Phenyl Ether	<	0.0020	0.1068
Chrysene	<	0.0002	0.0107
Dibenzo (a,h) Anthracene	<	0.0002	0.0107
1,2-Dichlorobenzene	<	0.0020	0.1068
1,3-Dichlorobenzene	<	0.0020	0.1068
1,4-Dichlorobenzene	<	0.0020	0.1068
3,3-Dichlorobenzidine	<	0.0010	0.0534
Diethyl Phthalate	<	0.0020	0.1068
Dimethyl Phthalate	<	0.0020	0.1068
Di-N-Butyl Phthalate	<	0.0020	0.1068
2,4-Dinitrotoluene	<	0.0020	0.1068
2,6-Dinitrotoluene	<	0.0020	0.1068
Di-N-Octyl Phthalate	<	0.0029	0.1602
1,2-Diphenylhydrazine	<	0.0020	0.1068
Fluoranthene	<	0.0002	0.0107
Fluorene	<	0.0002	0.0107
Hexachlorobenzene	<	0.0020	0.1068
Hexchlorobutadiene	<	0.0020	0.1068
Hexachlorocyclopentadiene	<	0.0020	0.1068
Hexachloroethane	<	0.0020	0.1068
Indeno (1,2,3-cd) Pyrene	<	0.0002	0.0107
Isophorone	<	0.0020	0.1068
Napthalene	<	0.0003	0.0160
Nitrobenzene	<	0.0029	0.1602
N-Nitrosodimethylamine	<	0.0020	0.1068
N-Nitrosodi-N-Propylamine	<	0.0020	0.1068
N-Nitrosodiphenylamine	<	0.0029	0.1602
Phenanthrene	<	0.0002	0.0107
Pyrene	<	0.0010	0.0534
1,2,4-Trichlorobenzene	<	0.0020	0.1068

Notes:

***2006 data is being used until production resumes**

< - Below Quantitation Limits (mg/l). The Quantitation Limit is the value reported.

Avg. Mass - estimated using year 2003-2004 LTA of 14,395 GPD.

Max Mass - calculated using the established WWTF flow rate of 26,000 GPD.



NUCLEAR FUEL SERVICES, INC.

a subsidiary of The Babcock & Wilcox Company

■ 1205 banner hill road ■ erwin, tn 37650 ■ phone 423.743.9141
■ www.nuclearfuelservices.com

TN0002038
7/2

21G-10-0063
GOV-05-01-01
ACF-10-0093

March 19, 2010

U.S. Environmental Protection Agency
Permit Section
Sam Nun Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Reference: NPDES Permit No. TN0002038

Dear Sirs:

Recent reorganizational activities at Nuclear Fuel Services, Inc. (NFS) have resulted in several changes to personnel and position titles. NFS submitted its NPDES Permit Renewal Application on February 24, 2010. At the request of Mrs. Beverly Brown, State of Tennessee, Johnson City Field Office, the NPDES Permit signatory pages are being resubmitted under the signature of President, Mr. David B. Amerine. EPA Form 3510-1, General Information, page 2 and EPA Form 3510-2C, Wastewater Discharge Information, page 4 are enclosed as Attachment I.

If you or you staff have any questions, require additional information, or wish to discuss this, please contact me or Mr. Robert Holley, Environmental Safety Manager, at (423) 743-1777. Please reference our unique document identification number (21G-10-0063) in any correspondence concerning this letter.

Sincerely,

NUCLEAR FUEL SERVICES, INC.

David B. Amerine,
President

Attachment

copy: Mr. Jeff Horton
Environmental Field Office Manager
Johnson City Environmental Assistance Center
2305 Silverdale Road
Johnson City, TN 37601-2162

RECEIVED

APR 06 2010

Permit Section

21G-10-0063
GOV-05-01-01
ACF-10-0093

Attachment I

EPA Form 3510-1 and EPA Form 3510-2C

(2 pages to follow)

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)

VIII. CONTRACT ANALYSIS INFORMATION

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

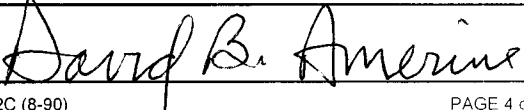
YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
General Engineering Laboratories, Inc.	2040 Savage Road Charleston, SC 29417	(843) 556-8171	Ar, Cd, Cr, Cu, Pb, Ni, Ag

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) David B. Amerine, President	B. PHONE NO. (area code & no.) (423) 743-9141
C. SIGNATURE 	D. DATE SIGNED 3-19-10

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)			
A. FIRST		B. SECOND	
C	7 2819	(specify) Manufacturing & Recovery of Nuclear Fuel (Non-Irradiated), Enrichment Blending of UNH, UN & UF6 Conversion, and Ammonia Recovery	(specify) N/A
15	16	19	15 16 19
C. THIRD		D. FOURTH	
C	7	(specify) N/A	(specify) N/A
15	16	19	15 16 19

VIII. OPERATOR INFORMATION			
A. NAME			B. Is the name listed in Item VIII-A also the owner?
C	8 Nuclear Fuel Services, Inc.		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
15	16	55	66

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify.)			D. PHONE (area code & no.)
F = FEDERAL	M = PUBLIC (other than federal or state)	P (specify)	C
S = STATE	O = OTHER (specify)		A
P = PRIVATE			(423) 743-9141
		56	15 18 21 22 26

E. STREET OR P.O. BOX	
1205 Banner Hill Road	
26	56

F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND
C	B Erwin	TN	37650	Is the facility located on Indian lands?
15	16	40 41	42 47 51	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
				52

X. EXISTING ENVIRONMENTAL PERMITS			
A. NPDES (Discharges to Surface Water)		D. PSD (Air Emissions from Proposed Sources)	
C	T I	C	T I
9	N	TN0002038	9 P
15	16 17 18	30	15 16 17 18 30
See Attachment 2			

B. UIC (Underground Injection of Fluids)		E. OTHER (specify)	
C	T I	C	T I
9	U	SNM-124	(specify) NRC Special Nuclear Materials License
15	16 17 18	30	15 18 17 18 30

C. RCRA (Hazardous Wastes)		E. OTHER (specify)	
C	T I	C	T I
9	R	TNHW-108	(specify) NPDES Storm Water Discharge Associated with Industrial Activity
15	16 17 18	30	15 16 17 18 30
			TNR050873

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)
 Nuclear Fuel Services, Inc. (NFS) is a nuclear fuel manufacturing and uranium recovery facility. The facility also conducts enrichment blending of uranyl nitrate hexahydrate (UNH), uranyl nitrate (UN) & uranium hexafluoride (UF6) Conversion, and Ammonia Recovery. The facility is performing decommissioning/remediation activities and groundwater treatment activities, which are related to past activities.

XIII. CERTIFICATION (see instructions)
 I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
David B. Amerine, President		3-19-10

COMMENTS FOR OFFICIAL USE ONLY	
C	
15	16
	56