DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL

ADDRESS ATTACHMENT FOR NPDES PERMIT APPLICATION & STATE OPERATION PERMIT APPLICATION

This must be filled out to complete your permit application.

NPDES/STATE PERMIT NO.: TN0022411

CORPORATE HEADQUARTERS: (Where the permit will go.)

CONTACT PERSON: Mike Abba

COMPANY NAME: CITGO Petroleum Corporation

STREET AND/OR P.O. BOX #: 2409 Knott Road

CITY: Knoxville STATE: TN ZIP CODE: 37921

PHONE NO: (865) 588-3555 E-MAIL ADDRESS: mabba@citgo.com

PERMIT BILLING ADDRESS: (Where the invoices will go.)

CONTACT PERSON: Mike Abba

FACILITY NAME: CITGO Petroleum Corporation

STREET AND/OR P.O. BOX #: 2409 Knott Road

CITY: Knoxville STATE: TN ZIP CODE: 37921

PHONE NO: (865) 588-3555 E-MAIL ADDRESS: mabba@citgo.com

FACILITY LOCATION: (Where the inspectors will go.)

FACILITY NAME: CITGO Petroleum Corporation

STREET ADDRESS: 2409 Knott Road

P.O. BOX #: _____ COUNTY: Knox

CITY: Knoxville STATE: TN ZIP CODE: 37921

PHONE NO: (865) 588-3555 E-MAIL ADDRESS: mabba@citgo.com

DMR MAILING ADDRESS: (Where the pre-printed Discharge Monitoring Reports will go) (Does not apply to SOP Permits)

CONTACT PERSON: Mike Abba

FACILITY NAME: CITGO Petroleum Corporation

STREET AND/OR P.O. BOX #: 2409 Knott Road

CITY: Knoxville STATE: TN ZIP CODE: 37921

PHONE NO: (865) 588-3555 E-MAIL ADDRESS: mabba@citgo.com

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F TN0022411 (T/A: ; C: D)

LABEL ITEMS	
I.	EPA I.D. NUMBER
III.	FACILITY NAME
V.	FACILITY MAILING ADDRESS
VI.	FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

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" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		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

1 SKIP: CITGO Petroleum Corporation

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Abba, Mike Terminal Manager	(865) 588-3555

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 2409 Knott Road

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Knoxville	TN	37921

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 2409 Knott Road

B. COUNTY NAME: Knox

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Knoxville	TN	37921	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
7 5171 (specify) Petroleum Bulk Storage	7 (specify)
C. THIRD	**D. FOURTH**
7 (specify)	7 (specify)

VIII. OPERATOR INFORMATION

A. NAME

8 CITGO Petroleum Corporation

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*

A (865) 588-3555

E. STREET OR P.O. BOX

2409 Knox Road

F. CITY OR TOWN

B Knoxville

G. STATE TN

H. ZIP CODE 37921

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N TN0022411	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 (specify)
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R TND000609750	9 (specify)

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)*

Bulk storage of gasoline and diesel fuels and additives and transfer to tank trucks.

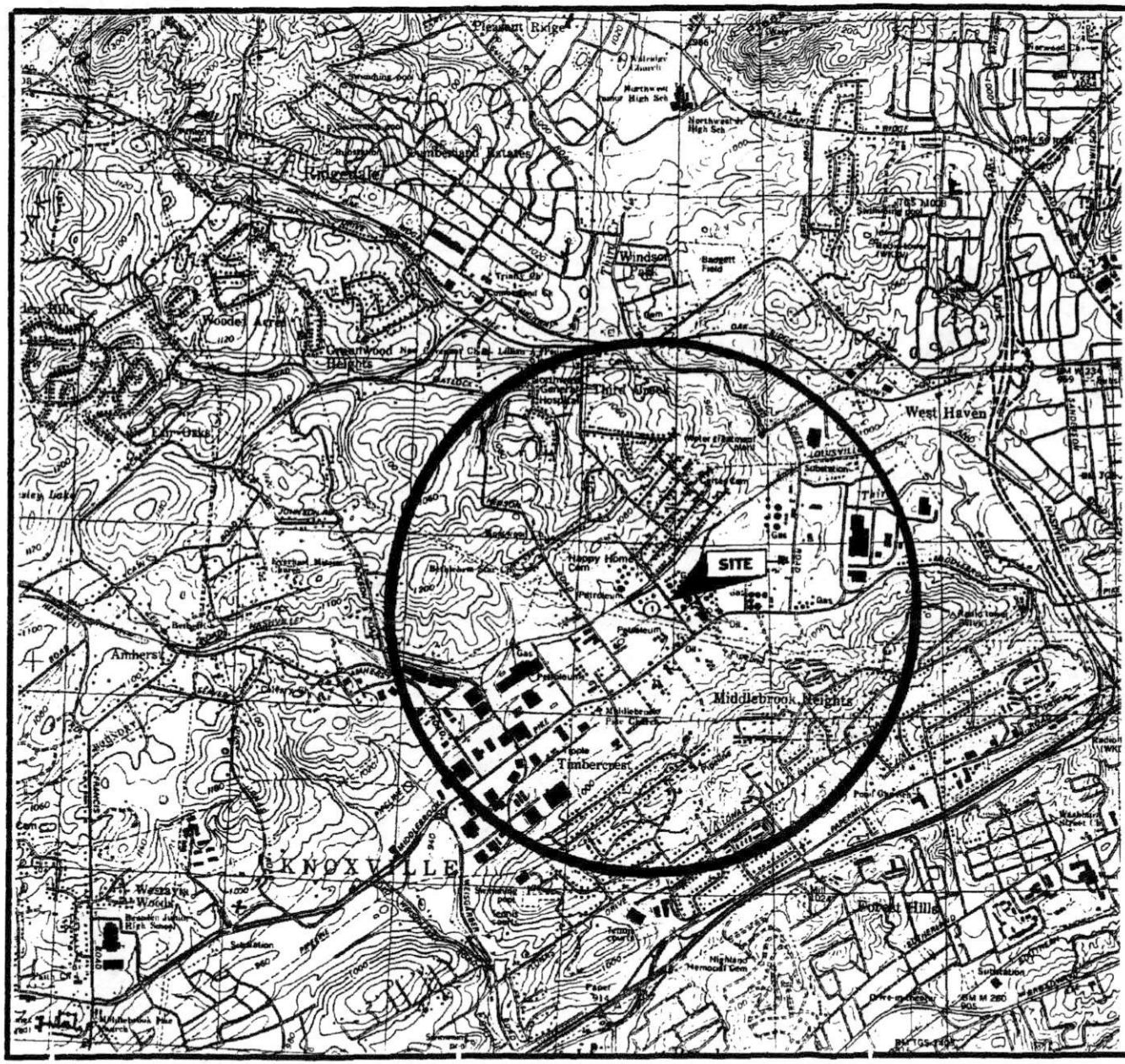
XIII. CERTIFICATION *(see instructions)*

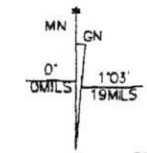
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information 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
Mike Abba Terminal Manager	Mike Abba	5/26/2017

COMMENTS FOR OFFICIAL USE ONLY

C





JTM GRID AND 1976 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

NOTES:
1. STORMWATER TREATMENT SYSTEM AND OUTFALL 001 LOCATED AT LATITUDE 35°57'44" AND LONGITUDE 84°00'15" AND IS DESIGNATED BY (1)

SOURCE: TOPOGRAPHIC MAP OF KNOXVILLE AND BEARDEN, TENN. QUADRANGLES, 7.5 MINUTE SERIES

SCALE
0 2000
FEET

CONTOUR INTERVAL 20 FEET

S&ME
ENVIRONMENTAL SERVICES
ENGINEERING · TESTING

TOPOGRAPHIC MAP OF SURROUONDING AREAS
CITGO PETROLEUM CORPORATION
KNOXVILLE, TENNESEE

SCALE: AS SHOWN	DRAWN BY: SB	CHECKED BY:	
JOB NO: 1264-91-402	DATE: 10-13-95	FIGURE NO:	1

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
TN0022411

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

FORM **2C** NPDES

EPA

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

I. OUTFALL LOCATION

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

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	35.00	57.00	44.00	84.00	0.00	15.00	Unnamed tributary at mile 0.5 to Third
							Creek at mile 5.3 which empties into Ft
							Loudon Reservoir at Tennessee River
							mile 645.9

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. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Rack Wash Water and Rack Stormwater	0.042 MGD (est)	Oil/Water Seperation	XX	

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?

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

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

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

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

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

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

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

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

IV. IMPROVEMENTS

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

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

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

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

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

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
TN0022411

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
Xylene	Misc leaks/drips, etc. of petroleum products.		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

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

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

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

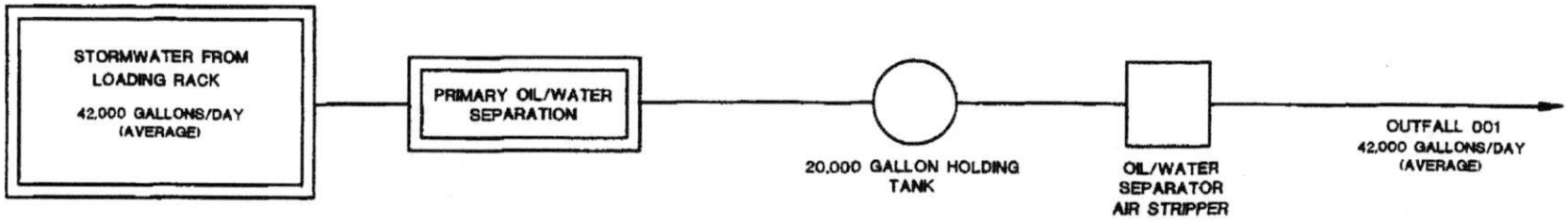
☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
ESC Lab Sciences	12065 Lebanon Rd Mount Juliet, TN 37122	(615) 758-5858	BOD COD Total nitrogen Ammonia Nitrate-Nitrite Oil & Grease Phosphorus, Total Kjeldahl Nitrogen, TKN TOC Suspended Solids Method 624 Method 625

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Mike Abba, Terminal Manager	(865) 588-3555
C. SIGNATURE	D. DATE SIGNED



FACILITY WATER FLOW DIAGRAM
STORMWATER TREATMENT SYSTEM
CITGO PETROLEUM CORPORATION
KNOXVILLE, TENNESSEE

SCALE: NOT TO SCALE	DRAWN BY:	
JOB NO:	DATE:	

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

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): TN0022411

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

OUTFALL NO.

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 a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	37.8						1	mg/L				
b. Chemical Oxygen Demand (*COD*)	59.6						1	mg/L				
c. Total Organic Carbon (*TOC*)	16.0						1	mg/L				
d. Total Suspended Solids (*TSS*)	7.00						1	mg/L				
e. Ammonia (*as N*)	<0.100						1	mg/L				
f. Flow	VALUE		VALUE		VALUE					VALUE		
g. Temperature (*winter*)	VALUE ambient		VALUE		VALUE			°C		VALUE		
h. Temperature (*summer*)	VALUE ambient		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 7.8	MAXIMUM 7.8	MINIMUM	MAXIMUM			1	STANDARD UNITS				

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

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		0.372						1	mg/L				

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		0.372						1	mg/L				
h. Oil and Grease	X		<5.10						1	mg/L				
i. Phosphorus (as P), Total (7723-14-0)	X		<0.100						1	mg/L				
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
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												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
TN0022411	001

CONTINUED FROM PAGE 3 OF FORM 2-C

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

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

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)	X	X		<0.00100						1	mg/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)	X	X		<0.00100						1	mg/L				
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)	X	X		<0.00100						1	mg/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloro-ethane (71-55-6)			X												
28V. 1,1,2-Trichloro-ethane (79-00-5)			X												
29V Trichloro-ethylene (79-01-6)			X												
30V. Trichloro-fluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichloro-phenol (120-83-2)			X												
3A. 2,4-Dimethyl-phenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitro-phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachloro-phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichloro-phenol (88-05-2)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)			X												
23B. 3,3-Dichloro-benzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitro-toluene (121-14-2)			X												
28B. 2,6-Dinitro-toluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachloro-benzene (118-74-1)			X												
34B. Hexachloro-butadiene (87-68-3)			X												
35B. Hexachloro-cyclopentadiene (77-47-4)			X												
36B Hexachloro-ethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)	X	X		0.00228						1	mg/L				
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitro-sodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (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												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
TN0022411	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			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												

ANALYTICAL REPORT

March 30, 2017

CITGO-Knoxville, TN

Sample Delivery Group:	L897654
Samples Received:	03/23/2017
Project Number:	NPDES Renew
Description:	wastewater

Report To:

Mr. Mike Abba
2409 Knott Road
Knoxville, TN 37921

Entire Report Reviewed By:

Linda Cashman
Technical Service Representative

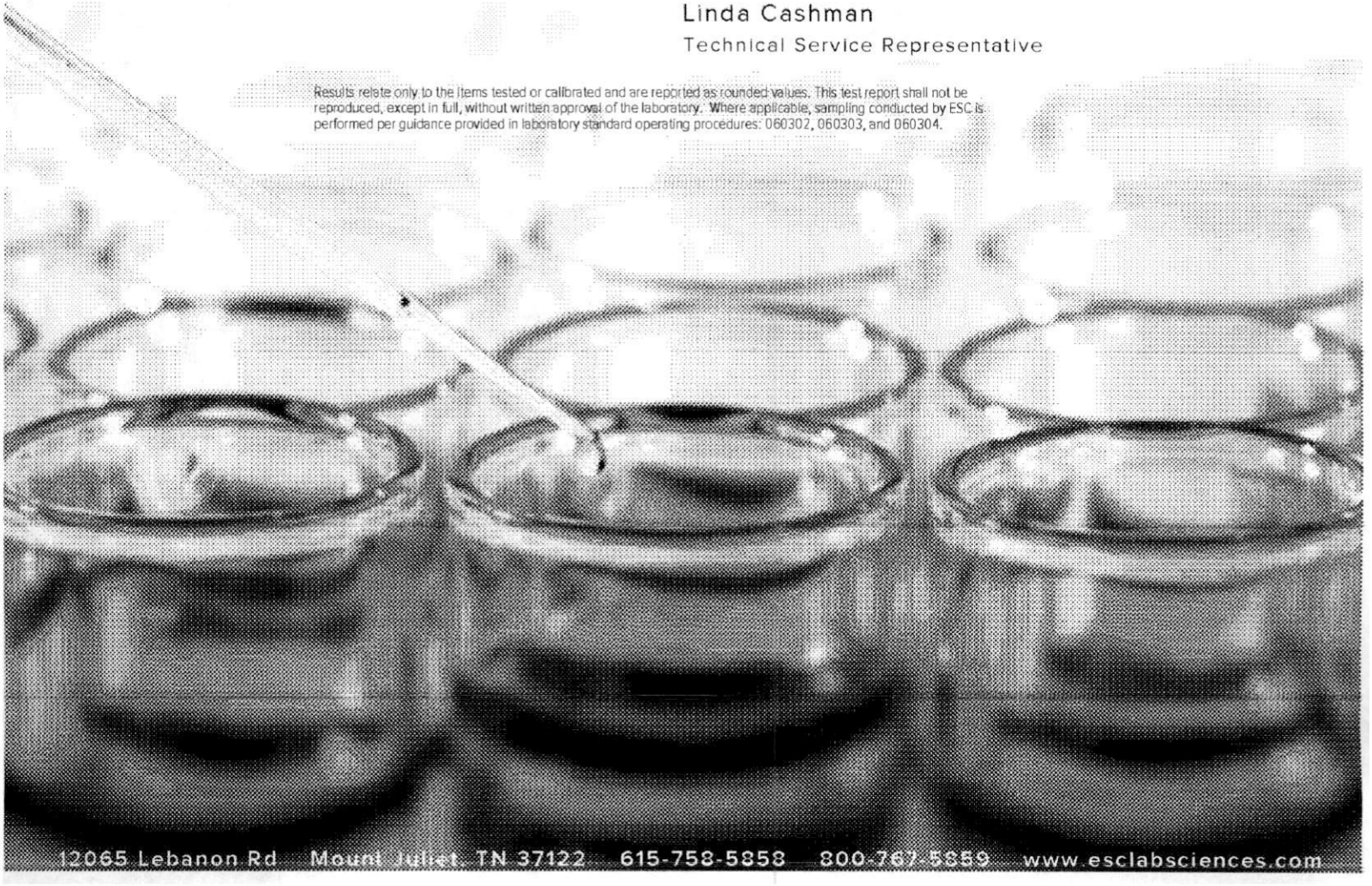


TABLE OF CONTENTS

OUTFALL 001 RENEWAL L897654-01 WW

Collected by: Michael Abba
Collected date/time: 03/22/17 10:00
Received date/time: 03/23/17 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Calculated Results	WG964582	1	03/27/17 14:03	03/28/17 14:02	DR
Gravimetric Analysis by Method 2540 D-2011	WG964490	1	03/28/17 09:16	03/28/17 15:14	AS
Wet Chemistry by Method 1664A	WG964729	1	03/28/17 08:22	03/28/17 14:42	SHG
Wet Chemistry by Method 350.1	WG964474	1	03/27/17 15:38	03/27/17 15:38	DR
Wet Chemistry by Method 351.2	WG963692	1	03/23/17 22:31	03/24/17 11:08	JER
Wet Chemistry by Method 353.2	WG964582	1	03/28/17 14:02	03/28/17 14:02	DR
Wet Chemistry by Method 365.4	WG964010	1	03/23/17 22:31	03/27/17 20:48	ASK
Wet Chemistry by Method 410.4	WG963769	1	03/23/17 23:07	03/24/17 01:56	MZ
Wet Chemistry by Method 5210 B-2011	WG963502	1	03/23/17 14:39	03/28/17 11:10	JLG
Wet Chemistry by Method 5310 B-2011	WG964764	1	03/29/17 11:23	03/29/17 11:23	SJM
Volatile Organic Compounds (GC/MS) by Method 624	WG963599	1	03/25/17 14:06	03/25/17 14:06	ACG
Semi-Volatile Organic Compounds (GC) by Method EPH	WG963744	1	03/26/17 07:26	03/28/17 04:44	TRF
Semi Volatile Organic Compounds (GC/MS) by Method 625	WG964619	1	03/26/17 22:22	03/28/17 22:06	JF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Linda Cashman
Technical Service Representative

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Total Nitrogen	0.372		0.100	1	03/28/2017 14:02	WG964582

Gravimetric Analysis by Method 2540 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Suspended Solids	7.00		2.50	1	03/28/2017 15:14	WG964490

Wet Chemistry by Method 1664A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Oil & Grease (Hexane Extr)	ND		5.10	1	03/28/2017 14:42	WG964729

Wet Chemistry by Method 350.1

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Ammonia Nitrogen	ND		0.100	1	03/27/2017 15:38	WG964474

Wet Chemistry by Method 351.2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	ND		0.250	1	03/24/2017 11:08	WG963692

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	0.372	J6	0.100	1	03/28/2017 14:02	WG964582

Wet Chemistry by Method 365.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Phosphorus,Total	ND		0.100	1	03/27/2017 20:48	WG964010

Wet Chemistry by Method 410.4

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
COD	59.6		10.0	1	03/24/2017 01:56	WG963769

Wet Chemistry by Method 5210 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
BOD	37.8		10.0	1	03/28/2017 11:10	WG963502

Wet Chemistry by Method 5310 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	16.0		1.00	1	03/29/2017 11:23	WG964764

Volatile Organic Compounds (GC/MS) by Method 624

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	ND		0.00100	1	03/25/2017 14:06	WG963599
Ethylbenzene	ND		0.00100	1	03/25/2017 14:06	WG963599
Toluene	ND		0.00100	1	03/25/2017 14:06	WG963599
Xylenes, Total	ND		0.00300	1	03/25/2017 14:06	WG963599
(S) Toluene-d8	*105*		*80.0-120*		*03/25/2017 14:06*	WG963599
(S) Dibromofluoromethane	*90.4*		*76.0-123*		*03/25/2017 14:06*	WG963599
(S) a,a,a-Trifluorotoluene	*106*		*80.0-120*		*03/25/2017 14:06*	WG963599
(S) 4-Bromofluorobenzene	*98.4*		*80.0-120*		*03/25/2017 14:06*	WG963599

Semi-Volatile Organic Compounds (GC) by Method EPH

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Extractable Petroleum Hydrocarbon	0.351	B	0.100	1	03/28/2017 04:44	WG963744
(S) o-Terphenyl	*75.9*		*31.0-160*		*03/28/2017 04:44*	WG963744

Semi Volatile Organic Compounds (GC/MS) by Method 625

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	0.00228		0.00100	1	03/28/2017 22:06	WG964619
(S) Nitrobenzene-d5	*87.2*		*10.0-126*		*03/28/2017 22:06*	WG964619
(S) 2-Fluorobiphenyl	*92.8*		*22.0-127*		*03/28/2017 22:06*	WG964619
(S) p-Terphenyl-d14	*108*		*29.0-141*		*03/28/2017 22:06*	WG964619

Method Blank (MB)

(MB) R3206732-1 03/28/17 15:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Suspended Solids	U		0.350	2.50

L897491-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897491-01 03/28/17 15:14 • (DUP) R3206732-4 03/28/17 15:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	107	115	1	7.23	J1	5

L897692-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897692-01 03/28/17 15:14 • (DUP) R3206732-5 03/28/17 15:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Suspended Solids	640	620	1	3.17		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206732-2 03/28/17 15:14 • (LCSD) R3206732-3 03/28/17 15:14

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Suspended Solids	773	808	804	105	104	85.0-115			0.496	5

Method Blank (MB)

(MB) R3206409-1 03/28/17 14:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Oil & Grease (Hexane Extr)	U		1.16	5.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206409-2 03/28/17 14:42 • (LCSD) R3206409-3 03/28/17 14:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Oil & Grease (Hexane Extr)	40.0	39.7	39.9	99.3	99.8	78.0-114			0.503	20

L897839-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897839-02 03/28/17 14:43 • (MS) R3206409-4 03/28/17 14:43 • (MSD) R3206409-5 03/28/17 14:43

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Oil & Grease (Hexane Extr)	40.0	7.98	41.1	38.2	82.8	75.5	1	78.0-114		J3	7.39	18

Method Blank (MB)

(MB) R3206214-2 03/27/17 15:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Ammonia Nitrogen	U		0.0317	0.100

L897654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897654-01 03/27/17 15:38 • (DUP) R3206214-5 03/27/17 15:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Ammonia Nitrogen	ND	0.000	1	0		20

L897706-03 Original Sample (OS) • Duplicate (DUP)

(OS) L897706-03 03/27/17 15:55 • (DUP) R3206214-7 03/27/17 15:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Ammonia Nitrogen	2.39	2.43	1	2		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206214-3 03/27/17 15:34 • (LCSD) R3206214-4 03/27/17 15:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Ammonia Nitrogen	7.50	6.91	6.86	92	92	90-110			1	20

L897703-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L897703-03 03/27/17 15:41 • (MS) R3206214-6 03/27/17 15:42

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Ammonia Nitrogen	5.00	0.0780	5.11	101	1	90-110	

L897835-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897835-07 03/27/17 16:19 • (MS) R3206214-8 03/27/17 16:25 • (MSD) R3206214-9 03/27/17 16:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Ammonia Nitrogen	5.00	ND	5.16	5.17	103	103	1	90-110			0	20

Method Blank (MB)

(MB) R3205710-1 03/24/17 11:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Kjeldahl Nitrogen, TKN	U		0.035	0.250

L897654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897654-01 03/24/17 11:08 • (DUP) R3205710-4 03/24/17 11:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Kjeldahl Nitrogen, TKN	ND	0.215	1	0		20

L897826-03 Original Sample (OS) • Duplicate (DUP)

(OS) L897826-03 03/24/17 11:23 • (DUP) R3205710-6 03/24/17 11:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Kjeldahl Nitrogen, TKN	1.22	0.561	1	74	P1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3205710-2 03/24/17 11:04 • (LCSD) R3205710-3 03/24/17 11:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Kjeldahl Nitrogen, TKN	10.0	9.71	9.74	97	97	90-110			0	20

L897709-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897709-01 03/24/17 11:11 • (MS) R3205710-5 03/24/17 11:12 • (MSD) R3205710-8 03/24/17 11:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Kjeldahl Nitrogen, TKN	5.00	2.39	7.15	6.63	95	85	1	90-110		J6	8	20

L897859-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L897859-03 03/24/17 11:31 • (MS) R3205710-7 03/24/17 11:32

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Kjeldahl Nitrogen, TKN	5.00	4.70	9.07	87	1	90-110	J6

Method Blank (MB)

(MB) R3206427-1 03/28/17 13:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0197	0.100

L897474-02 Original Sample (OS) • Duplicate (DUP)

(OS) L897474-02 03/28/17 14:00 • (DUP) R3206427-4 03/28/17 14:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate-Nitrite	3.69	3.66	1	1		20

L897828-09 Original Sample (OS) • Duplicate (DUP)

(OS) L897828-09 03/28/17 14:14 • (DUP) R3206427-6 03/28/17 14:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate-Nitrite	0.0400	0.000	1	200	J1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206427-2 03/28/17 13:56 • (LCSD) R3206427-3 03/28/17 13:57

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate-Nitrite	5.00	4.97	4.90	99	98	90-110			1	20

L897654-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L897654-01 03/28/17 14:02 • (MS) R3206427-5 03/28/17 14:03

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	5.00	0.372	4.65	86	1	90-110	J6

L898123-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L898123-01 03/28/17 14:35 • (MS) R3206427-7 03/28/17 14:36 • (MSD) R3206427-8 03/28/17 14:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	5.00	1.32	5.63	5.66	86	87	1	90-110	J6	J6	0	20

Method Blank (MB)

(MB) R3206238-1 03/27/17 20:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Phosphorus,Total	U		0.035	0.100

L897654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897654-01 03/27/17 20:48 • (DUP) R3206238-4 03/27/17 20:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Phosphorus,Total	ND	0.0603	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206238-2 03/27/17 20:44 • (LCSD) R3206238-3 03/27/17 20:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Phosphorus,Total	2.00	2.00	2.01	100	101	90-110			0	20

L897709-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897709-01 03/27/17 20:51 • (MS) R3206238-5 03/27/17 20:52 • (MSD) R3206238-6 03/27/17 20:53

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Phosphorus,Total	2.50	0.379	2.83	2.66	98	91	1	90-110			6	20

Method Blank (MB)

(MB) R3205558-1 03/24/17 01:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
COD	U		3	10.0

L897649-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897649-01 03/24/17 01:56 • (DUP) R3205558-4 03/24/17 01:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	3670	3620	5	1		20

L897835-07 Original Sample (OS) • Duplicate (DUP)

(OS) L897835-07 03/24/17 02:00 • (DUP) R3205558-7 03/24/17 02:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
COD	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3205558-2 03/24/17 01:54 • (LCSD) R3205558-3 03/24/17 01:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
COD	242	234	232	97	96	90-110			1	20

L897829-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897829-01 03/24/17 01:58 • (MS) R3205558-5 03/24/17 01:58 • (MSD) R3205558-6 03/24/17 01:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	400	ND	400	402	100	100	1	80-120			0	20

Method Blank (MB)

(MB) R3206352-1 03/28/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
BOD	U		1	1.00

L897512-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897512-01 03/28/17 10:18 • (DUP) R3206352-5 03/28/17 10:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
BOD	ND	0.000	1	0		30

L897656-02 Original Sample (OS) • Duplicate (DUP)

(OS) L897656-02 03/28/17 11:14 • (DUP) R3206352-6 03/28/17 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
BOD	ND	0.000	1	0		30

L897702-02 Original Sample (OS) • Duplicate (DUP)

(OS) L897702-02 03/28/17 11:55 • (DUP) R3206352-7 03/28/17 11:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
BOD	ND	0.000	1	0		30

Laboratory Control Sample (LCS)

(LCS) R3206352-2 03/28/17 10:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
BOD	198	206	104	84.6-115	

Laboratory Control Sample (LCS)

(LCS) R3206352-3 03/28/17 11:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
BOD	198	201	102	84.6-115	

Laboratory Control Sample (LCS)

(LCS) R3206352-4 03/28/17 11:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
BOD	198	191	96.6	84.6-115	

Method Blank (MB)

(MB) R3206595-1 03/29/17 07:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TOC (Total Organic Carbon)	U		0.102	1.00

L897654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L897654-01 03/29/17 11:23 • (DUP) R3206595-6 03/29/17 11:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	16.0	16.3	1	2		20

L898089-01 Original Sample (OS) • Duplicate (DUP)

(OS) L898089-01 03/29/17 18:26 • (DUP) R3206595-7 03/29/17 18:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
TOC (Total Organic Carbon)	2.10	1.94	1	8		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206595-2 03/29/17 08:27 • (LCSD) R3206595-3 03/29/17 08:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TOC (Total Organic Carbon)	75.0	73.5	72.8	98	97	85-115			1	20

L897906-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897906-04 03/29/17 10:31 • (MS) R3206595-4 03/29/17 10:49 • (MSD) R3206595-5 03/29/17 11:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TOC (Total Organic Carbon)	50.0	14.5	65.1	64.2	101	99	1	80-120			1	20

Method Blank (MB)

(MB) R3206112-3 03/25/17 06:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Benzene	U		0.000331	0.00100
Ethylbenzene	U		0.000384	0.00100
Toluene	U		0.000412	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*106*			*80.0-120*
(S) Dibromofluoromethane	*91.1*			*76.0-123*
(S) a,a,a-Trifluorotoluene	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.5*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206112-1 03/25/17 04:57 • (LCSD) R3206112-2 03/25/17 05:20

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Benzene	0.0250	0.0259	0.0260	104	104	69.0-123			0.280	20
Ethylbenzene	0.0250	0.0211	0.0213	84.5	85.1	77.0-120			0.720	20
Toluene	0.0250	0.0254	0.0252	102	101	77.0-120			0.980	20
Xylenes, Total	0.0750	0.0645	0.0656	86.0	87.5	77.0-120			1.69	20
(S) Toluene-d8				*108*	*108*	*80.0-120*				
(S) Dibromofluoromethane				*93.6*	*92.4*	*76.0-123*				
(S) a,a,a-Trifluorotoluene				*106*	*107*	*80.0-120*				
(S) 4-Bromofluorobenzene				*96.1*	*96.4*	*80.0-120*				

L897228-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L897228-04 03/25/17 10:40 • (MS) R3206112-4 03/25/17 14:29 • (MSD) R3206112-5 03/25/17 14:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Benzene	0.0250	3.48	0.0974	0.0991	0.000	0.000	1	34.0-147	J4	J4	1.73	20
Ethylbenzene	0.0250	0.216	0.0265	0.0270	0.000	0.000	1	42.0-147	J4	J4	1.82	20
Toluene	0.0250	2.56	0.0777	0.0800	0.000	0.000	1	42.0-141	J4	J4	2.80	20
Xylenes, Total	0.0750	1.53	0.0963	0.0989	0.000	0.000	1	41.0-148	J4	J4	2.66	20
(S) Toluene-d8					*107*	*108*		*80.0-120*				
(S) Dibromofluoromethane					*95.0*	*94.4*		*76.0-123*				
(S) a,a,a-Trifluorotoluene					*107*	*107*		*80.0-120*				
(S) 4-Bromofluorobenzene					*95.8*	*98.1*		*80.0-120*				

Method Blank (MB)

(MB) R3206591-1 03/28/17 03:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Extractable Petroleum Hydrocarbon	0.0585	J	0.0318	0.100
(S) o-Terphenyl	*97.1*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206591-2 03/28/17 04:11 • (LCSD) R3206591-3 03/28/17 04:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Extractable Petroleum Hydrocarbon	1.50	1.60	1.42	107	94.5	50.0-150			12.0	20
(S) o-Terphenyl				*106*	*95.2*	*31.0-160*				

Method Blank (MB)

(MB) R3206582-3 03/28/17 12:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Naphthalene	U		0.000372	0.00100
(S) Nitrobenzene-d5	*85.6*			*10.0-126*
(S) 2-Fluorobiphenyl	*94.0*			*22.0-127*
(S) p-Terphenyl-d14	*102*			*29.0-141*

Laboratory Control Sample (LCS) · Laboratory Control Sample Duplicate (LCSD)

(LCS) R3206582-1 03/28/17 11:29 · (LCSD) R3206582-2 03/28/17 11:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Naphthalene	0.0500	0.0400	0.0406	79.9	81.1	33.0-120			1.46	28
(S) Nitrobenzene-d5				*88.5*	*90.3*	*10.0-126*				
(S) 2-Fluorobiphenyl				*101*	*101*	*22.0-127*				
(S) p-Terphenyl-d14				*110*	*112*	*29.0-141*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
~~Colorado~~	~~TN00003~~	~~North Carolina~~	~~Env375~~
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
~~Massachusetts~~	~~M-TN003~~	~~Vermont~~	~~VT2006~~
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [r/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**

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Report to: Mr. Mike Abba	Email To: maiba@citgo.com; [illegible]@citgo.com
Project Description: wastewater	City/State Collected: Knoxville TN
Phone: 865-588-3555 Fax:	Client Project #: NPDES Renew Lab Project #: CITGOKTN-NPDES RENEW
Collected by (print): [illegible]	Site/Facility ID #: P.O. #:
Collected by (signature): [signature] Immediately Packed on Ice N ___ Y ✓	Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day Quote #: Date Results Needed:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	O&GPHTHN 1000ml Amb NaThio	BOD 500mlHDPE-NoPres	COD Phos, NO2NO3, TKN 250mlHDPE-H2SO4	EPHTN 100ml Amb-HCl	NH3 500mlHDPE NaThio H2SO4	OGHEX 1L-Clr-Acid HCl	TOC 250mlAmb-HCl	TSS 1L-HDPE NoPres	V624BTEXN 40mlAmb-HCl
Outfall 001 renewal	Grab	WW		3/22/17	1000	12	X	X	X	X	X	X	X	X	X

ESC LAB SCIENCES — Chain of Custody Page ___ of ___

J049

Acctnum: CITGOKTN
Template: T78335
Prelogin: P593534
TSR: [illegible] - Linda Coleman
PB: [illegible]
Shipped Via: FedEX Ground

Remarks (Sample # (lab only)): -01

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ______

Remarks:

pH 7.8 Temp 58

Flow ______ Other ______

Samples returned via: ___ UPS ___ FedEx ___ Courier ______

Tracking #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
[signature]	3/22/17	1100	[signature]
[signature]	3-22-17	1700	
			Received for lab by: (Signature) [signature]

Trip Blank Received: Yes / No

Temp: 1.1 °C Bottles Received: 12

Date: 3-23-17 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK