

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0002402

Owner: Dyno Nobel Inc.
Address: 2795 East Cottonwood Parkway, Suite 500, Salt Lake City, UT 84121

Continuing Authority: same as above
Address: same as above

Facility Name: Dyno Nobel, Inc. (Carthage Plant)
Facility Address: 17562 Gum Road, Carthage, MO 64836

Legal Description: Sec. 13, T28N, R32W, Jasper County
UTM Coordinates: see following pages

Receiving Stream: see following pages
First Classified Stream and ID: see following pages
USGS Basin & Sub-watershed No.: Webb City – Center Creek (11070207-0607)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Industrial – SIC# 2892; NAICS# 325920

Dyno Nobel Inc. (Carthage Plant) operates a commercial explosive manufacturing facility in Carthage, Missouri. The facility has historically manufactured nitrate esters (NE) and NE based dynamics since the early 1900s. The Carthage Plant began to manufacture packaged emulsion explosives and cast booster explosives on a production scale in 1990 and 1995, respectively. In addition to explosives, other related products manufactured at the facility include mixed acids, denitrated sulfuric acid, and ammonium nitrate. The facility is also a distribution point for blasting agents, caps, and initiators. See following pages for outfall specific information; the facility has authorization to discharge only the itemized wastewater types through the specified active outfalls.

This permit authorizes only wastewater and stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas.

August 1, 2020
Effective Date

Edward B. Galbraith, Director, Division of Environmental Quality

July 31, 2025
Expiration Date

Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #020 – new 2020 renewal. Combined wastewater from: non-contact cooling water, laundry wastewater, boiler blowdown, and explosives manufacturing. Below grade collection system used to convey wastewater to the new treatment system; oil/water separator, scrubber, trickling filter, settling tank, granular activated carbon.

UTM Coordinates: X = 377652, Y = 4112336
Receiving Stream: Center Creek (P)
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design Flow: 0.3456 MGD (0.535 cfs)
Average Flow: unknown, new outfall

OUTFALL #004 – historically explosives manufacturing wastewater but routed to treatment system and outfall #020; currently only stormwater discharges permissible. Moved out of the instream to a location prior to entering the stream.

UTM Coordinates: X = 377762, Y = 4112131
Receiving Stream: East Fork Center Creek - Losing
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID# 3960
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #007 – stormwater; no treatment. Non-stormwater discharges of appropriately monitored and controlled steam condensate discharges (listed as #S14) are allowed.

UTM Coordinates: X = 377369, Y = 4112723
Receiving Stream: Center Creek - losing
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #008 – stormwater runoff from northwest part of property; no treatment. Non-stormwater discharges of appropriately monitored and controlled steam condensate discharges (listed as #S10, #S11, #S12, and #S13) are allowed.

UTM Coordinates: X = 377419, Y = 4112721
Receiving Stream: Center Creek - losing
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

Outfall #009 – stormwater runoff northwest of facility from No. 4 Gel.

UTM Coordinates: X = 377370, Y = 4112829
Receiving Stream: Center Creek - losing
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

Outfall #011 – historic non-contact cooling water from paperwrap emulsion hydraulic pumps, currently stormwater. Non-stormwater discharges of appropriately monitored and controlled steam condensate discharges (listed as #S18) are allowed.

UTM Coordinates: X = 378110, Y = 4111679
Receiving Stream: East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203; 303(d) List
Design Flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #017 – new 2020 renewal – stormwater; no treatment. Non-stormwater discharges of appropriately monitored and controlled steam condensate sources (listed as #S02, #S15, and #S17) are allowed.

UTM Coordinates: X = 377823, Y = 4111888
Receiving Stream: East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #018 – new 2020 renewal – groundwater seep

UTM Coordinates: X = 377673, Y = 4112304
Receiving Stream: Tributary to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: not applicable

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #021 – new 2020 renewal – stormwater; no treatment

UTM Coordinates: X = 378300 Y = 4111683
Receiving Stream: East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design Flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #022 – new 2020 renewal – stormwater; no treatment

UTM Coordinates: X = 378324, Y = 4111678
Receiving Stream: East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown; stormwater discharges dependent on precipitation

OUTFALL #S02 – new 2020 renewal – steam condensate from #2 Gel; no treatment

UTM Coordinates: X = 377866, Y = 4111803
Receiving Stream: overland flow to East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 1 gpm; 0.00144 MGD

OUTFALL #S05 – new 2020 renewal – steam condensate from #1 Bohlman; no treatment

UTM Coordinates: X = 377381, Y = 4112772
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 1 gpm; 0.00144 MGD

OUTFALL #S08 – new 2020 renewal – steam condensate from #1 Mix; no treatment

UTM Coordinates: X = 377465, Y = 4112619
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S10 – new 2020 renewal – steam condensate from PETN Nitrator; no treatment

UTM Coordinates: X = 377471, Y = 4112788
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 0.5 gpm; 0.00072 MGD

OUTFALL #S11 – new 2020 renewal – steam condensate from Cast Booster; no treatment

UTM Coordinates: X = 377521, Y = 4112823
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S12 – new 2020 renewal – steam condensate from maintenance area; no treatment

UTM Coordinates: X = 377695, Y = 4112577
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 3 gpm; 0.00432 MGD

OUTFALL #S13 – new 2020 renewal – steam condensate from shell house; no treatment

UTM Coordinates: X = 377747, Y = 4112502
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: unknown

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #S14 – new 2020 renewal – steam condensate from NG nitrator area; no treatment

UTM Coordinates: X = 377757, Y = 4112266
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S15 – new 2020 renewal – steam condensate from the dope house; no treatment

UTM Coordinates: X = 377960, Y = 4112294
Receiving Stream: overland flow to East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S17 – new 2020 renewal – steam condensate from the box house; no treatment

UTM Coordinates: X = 378140, Y = 4112314
Receiving Stream: overland flow to East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: unknown

OUTFALL #S18 – new 2020 renewal – steam condensate paperwrap; no treatment

UTM Coordinates: X = 378100, Y = 4111687
Receiving Stream: overland flow to East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S19 – new 2020 renewal – steam condensate Chub Emulsion; no treatment

UTM Coordinates: X = 378355, Y = 4112120
Receiving Stream: overland flow to East Fork Center Creek
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID #3960 East Fork Center Creek
Second Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 2 gpm; 0.00288 MGD

OUTFALL #S20 – new 2020 renewal – steam condensate from #5 Gel; no treatment

UTM Coordinates: X = 377430, Y = 4112699
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Maximum Flow: 1 gpm; 0.00144 MGD

OUTFALL #S21 – new 2020 renewal – steam condensate (erroneously identified in the July 2020 public notice draft as outfall #019 – stormwater); steam from #1 Storehouse

UTM Coordinates: X = 377569, Y = 4112462
Receiving Stream: overland flow to Center Creek
First Classified Stream and ID: Center Creek (P) WBID# 3203 [303(d) List]
Design flow: unknown

FACILITY DESCRIPTION (CONTINUED)

CLASS V INJECTION WELLS – DOMESTIC WASTEWATER SYSTEMS:

Sys. #	Buildings Served	Site Building Numbers:	SWPPP Building #s	X =	Y =
D01	DNTI Maintenance	3-114	B94	378734	4111963
D02	DNTI Office	3-143	none	378704	4112040
D03	Magazine Office	none	none	378615	4112038
D04	Chub Plant	3-145	B71	378512	4112156
D05	Chub Rail Road	3-151	none	378408	4112413
D06	Box House	3-162, 3-163, 3-164, 3-166	B63	378114	4112311
D07	Café, Changehouse, Powder Lab, Powder Lab Storage	4-110, 4-111	B35, B36, B37	378062	4112469
D08	Chub Case End	3-159	B69	378293	4112189
D09	Main Office	4-107	B28	377977	4112764
D10	Main Office	4-107	B28	377956	4112764
D11	Dynoseis	4-102	B10	377762	4112790
D12	Power House	4-113, 4-114	B38, B39	377935	4112428
D13	Dope House Restroom	3-115, 3-117	B59	378005	4112302
D14	Guard House	4-101	none	377950	4112791
D15	Old Office	4-105	B28	377966	4112691
D17	Nitroglycerin Nitrator	1-159, 1-160, 1-161	none	377826	4112351
D18	Powder Line Office	3-125	B68	377994	4112116
D19	Shell House	1-103, 1-104	B23	377731	4112514
D21	Locy Shop	1-110, 1-107	B20, B97	377649	4112564
D23	#1 Bo Rail Road	1-138	B03	377370	4112766
D24	Cast Booster	1-121	B05, B06	377571	4112828
D25A	Cast Booster	1-122	B05, B06	377449	4112864
D25B	Cast Booster	1-123	B05, B06	377449	4112864
D25C	Cast Booster	1-124	B05, B06	377449	4112864
D25D	Cast Booster	1-125	B05, B06	377449	4112864
D26	#1 Mix and #5 Gelly Rail Road	1-140, 1-141, 1-142	B09, B16	377422	4112669
D27	#1 Gelly Restroom	2-114, 2-115, 2-116	B81	377883	4111961
D29	#2 Hall and #3 Gelly Rail Road	2-130, 2-131, 2-132	B92	377917	4111608
D30	#2 Bo Rail Road	2-134	none	377981	4111563
D31	Paperwrap	2-142 - 2-148	B86	378102	4111679
D32	Transfer Dock	3-134	B89	378319	4111653
D34	#2 Mix	2-105 - 2-113	B75	377846	4112077

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
OUTFALL #020 <i>process wastewater</i>						
TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS						
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2020 and remain in effect until expiration of the permit. Discharges shall be controlled, limited, and monitored by the permittee as specified below:						
LIMIT SET: M						
PHYSICAL						
Flow	MGD	0.3456		*	once/weekday ▼	24 hr. total
Temperature	°F	*		*	once/month	grab
TECHNOLOGY LIMITS						
Biochemical Oxygen Demand ₅	mg/L	45		30	once/week ♦	grab
Biochemical Oxygen Demand ₅	lbs/day	6,480		2,160	once/week ♦	grab
Chemical Oxygen Demand	mg/L	*		*	once/week ♦	grab
Chemical Oxygen Demand	lbs/day	69,930		23,310	once/week ♦	grab
Total Suspended Solids	mg/L	45		30	once/week ♦	grab
Total Suspended Solids	lbs/day	2,250		756	once/week ♦	grab
CONVENTIONAL						
Halogens, Total ‡	µg/L	*		*	once/month	grab
Oil & Grease	mg/L	*		*	once/month	grab
pH †	SU	6.0 to 9.0		6.0 to 9.0	once/month	grab
METALS						
Aluminum Total Recoverable	µg/L	*		*	once/month	grab
Copper, Total Recoverable	µg/L	*		*	once/month	grab
Lead, Total Recoverable	µg/L	*		*	once/month	grab
Zinc, Total Recoverable	µg/L	*		*	once/month	grab
NUTRIENTS						
Ammonia as N	mg/L	22.0		8.4	once/week ♦	grab
Ammonia as N (mass)	lbs/day	*		*	once/week ♦	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/month	grab
Nitrate plus Nitrite	mg/L	*		*	once/month	grab
Phosphorus, Total (TP)	mg/L	*		*	once/month	grab
OTHER						
Chloride	mg/L	*		*	once/month	grab
Sulfate	mg/L	*		*	once/month	grab
Chloride plus Sulfate	mg/L	*		*	once/month	grab
Ethylene Glycol Dinitrate (EGDN)	µg/L	2,100		1,100	once/week ♦	grab
Nitroglycerin	mg/L	11.5		5.8	once/week ♦	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>SEPTEMBER 28, 2020</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
LIMIT SET: A						
Whole Effluent Toxicity, Chronic See Special Condition #1	TU _c	5.9			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2021</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

OUTFALLS #S12, #S15, AND #S21 <i>Steam Condensate</i>		TABLE A-2 INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from these outfall(s) as specified. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-5 must be achieved as soon as possible but no later than August 1, 2025 . These interim effluent limitations are effective beginning August 1, 2020 and remain in effect through July 31, 2025 or as soon as possible. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: M						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hr. total measured
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
Chlorine, Total Residual ‡	µg/L	*		*	once/month	grab
pH †	SU	*		*	once/month	grab
Total Suspended Solids	mg/L	*		*	once/month	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/month	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/month	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/month	grab
OTHER						
Chloride	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>SEPTEMBER 28, 2020</u> .						

OUTFALLS #S12, #S15, AND #S21 <i>Steam Condensate</i>		TABLE A-3 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2025 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: M						
PHYSICAL						
Flow	MGD	*		*	once/month	24 hr. total measured
Temperature	°F	*		*	once/month	measured
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/month	grab
Chlorine, Total Residual ‡	µg/L	*		*	once/month	grab
pH †	SU	6.0 to 9.0		6.0 to 9.0	once/month	grab
Total Suspended Solids	mg/L	*		*	once/month	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/month	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/month	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/month	grab
OTHER						
Chloride	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>SEPTEMBER 28, 2025</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

OUTFALLS #S05, #S08, #S11, #S14, #S18, #S19, AND #S20 <i>Steam Condensate</i>		TABLE A-4 INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from these outfall(s) as specified. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-5 must be achieved as soon as possible but no later than August 1, 2025 . These interim effluent limitations are effective beginning August 1, 2020 and remain in effect through July 31, 2025 or as soon as possible. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		*	once/quarter ◊	24 hr. total measured
Temperature	°F	*		*	once/quarter ◊	
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/quarter ◊	grab
Chlorine, Total Residual †	µg/L	*		*	once/quarter ◊	grab
pH †	SU	*		*	once/quarter ◊	grab
Total Suspended Solids	mg/L	*		*	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/quarter ◊	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/quarter ◊	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/quarter ◊	grab
OTHER						
Chloride	mg/L	*		*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2020</u> .						

OUTFALLS #S05, #S08, #S11, #S14, #S18, #S19, AND #S20 <i>Steam Condensate</i>		TABLE A-5 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2025 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		*	once/quarter ◊	24 hr. total measured
Temperature	°F	*		*	once/quarter ◊	
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/quarter ◊	grab
Chlorine, Total Residual †	µg/L	*		*	once/quarter ◊	grab
pH †	SU	6.0 to 9.0		6.0 to 9.0	once/quarter ◊	grab
Total Suspended Solids	mg/L	*		*	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/quarter ◊	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/quarter ◊	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/quarter ◊	grab
OTHER						
Chloride	mg/L	*		*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2025</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

OUTFALLS #S10, #S13, #S17 <i>Steam Condensate</i>		TABLE A-6 INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from outfall(s) as specified. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-7 must be achieved as soon as possible but no later than August 1, 2025 . These interim effluent limitations are effective beginning August 1, 2020 and remain in effect through July 31, 2025 or as soon as possible. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: A						
PHYSICAL						
Flow	MGD	*		*	once/year	24 hr. total measured
Temperature	°F	*		*	once/year	
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/year	grab
Chlorine, Total Residual †	µg/L	*		*	once/year	grab
pH †	SU	*		*	once/year	grab
Total Suspended Solids	mg/L	*		*	once/year	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/year	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/year	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/year	grab
OTHER						
Chloride	mg/L	*		*	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2021</u> .						

OUTFALLS #S10, #S13, #S17 <i>Steam Condensate</i>		TABLE A-7 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2025 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: A						
PHYSICAL						
Flow	MGD	*		*	once/year	24 hr. total measured
Temperature	°F	*		*	once/year	
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/year	grab
Chlorine, Total Residual †	µg/L	*		*	once/year	grab
pH †	SU	6.0 to 9.0		6.0 to 9.0	once/year	grab
Total Suspended Solids	mg/L	*		*	once/year	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/year	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/year	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/year	grab
OTHER						
Chloride	mg/L	*		*	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2026</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

OUTFALL #S02 <i>Steam Condensate</i>		TABLE A-8 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS **				
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2020 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		*	once/quarter ◊	24 hr. total
Temperature	°F	*		*	once/quarter ◊	measured
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	*		*	once/quarter ◊	grab
Chlorine, Total Residual ‡	µg/L	*		*	once/quarter ◊	grab
pH †	SU	6.0 to 9.0		6.0 to 9.0	once/quarter ◊	grab
Total Suspended Solids	mg/L	*		*	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/quarter ◊	grab
Kjeldahl Nitrogen, Total (TKN)	mg/L	*		*	once/quarter ◊	grab
Nitrate plus Nitrite as N	mg/L	*		*	once/quarter ◊	grab
OTHER						
Chloride	mg/L	*		*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2020</u> .						

OUTFALLS #004, #007, #008, #009, #011, #017, #021, AND #022 <i>Stormwater Only</i>		TABLE A-9 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The permittee is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on August 1, 2020 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Stormwater Flow	MGD	*		-	once/quarter ◊	24 Hr. Est.
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	**		45	once/quarter ◊	grab
Oil & Grease	mg/L	**		10	once/quarter ◊	grab
pH †	SU	**		6.0 to 9.0	once/quarter ◊	grab
Total Suspended Solids	mg/L	**		50	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	**		4.0	once/quarter ◊	grab
OTHER						
Nitroglycerin	µg/L	**		200	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2020</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

- * Monitoring and reporting requirement only.
- ** Monitoring and reporting requirement with benchmark.
- † The facility will report the minimum and maximum values. pH is not to be averaged. The facility will report all pH measurements in an uploaded attachment for all steam condensate outfalls.
- ‡ This permit contains Total Residual Chlorine (TRC) and total halogens monitoring and limits, which is performed using the same test as specified below. The effluent limits contained in this permit are below the minimum quantification level (ML) of the most sensitive EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct all analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- ▼ The facility shall monitor for this parameter each weekday. A weekday is Monday, Tuesday, Wednesday, Thursday, and Friday. National holidays are exempted from this requirement.
- ◆ The facility shall monitor this parameter at least once per week. A week is from Monday through Sunday. Averaging of weekly measurements for the month shall be completed on only measurements completed in the month.
- *✱ The facility shall obtain a steam condensate sample directly from the discharging location.
- ◇ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	QUARTERLY EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

B. SCHEDULE OF COMPLIANCE

Schedules of compliance are allowed per 40 CFR 122.47 and 10 CSR 20-7.031(11). The facility shall attain compliance with final effluent limitations established in this permit as soon as reasonably achievable:

1. Within six months of the effective date of this permit, the permittee shall report progress made in attaining compliance with the final effluent limits.
2. The permittee shall submit interim progress reports detailing progress made in attaining compliance with the final effluent limits every 12 months from effective date. The first report is due August 1, 2021.
3. Within 5 years of the effective date of this permit, the permittee shall attain compliance with the final effluent limits at steam condensate outfalls #S05, #S08, #S10, #S11, #S12, #S13, #S14 #S15, #S17, #S18, #S19, #S20, and #S21, for pH.

This facility must submit all reports via the electronic reporting system.

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I and Part III standard conditions dated August 1, 2014 and August 1, 2019, respectively, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. Chronic Whole Effluent Toxicity (WET) Testing shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the most recent edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 7-day, static, renewal toxicity tests with the following species:
 - o The fathead minnow, *Pimephales promelas* (Survival and Growth Test Method 1000.0).
 - o The daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
 - (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
 - (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The Allowable Effluent Concentration (AEC) is 51.2%, the dilution series is: 100%, 50%, 25%, 12.5%, and 6.25%.
 - (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
 - (f) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of chronic toxic units ($TU_c = 100/IC_{25}$) reported according to the *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* chapter on report preparation and test review. The 25 percent Inhibition Effect Concentration (IC_{25}) is the toxic or effluent concentration that would cause 25 percent reduction in mean young per female or in growth for the test populations.
 - (g) Accelerated Testing Trigger: If the regularly scheduled chronic WET test exceeds the TU_c limit established in the permit, the permittee shall conduct accelerated follow-up WET testing as prescribed in the following conditions. Results of the follow-up accelerated WET testing shall be reported in TU_c . This permit requires the following additional toxicity testing if any one test result exceeds a TU_c limit. (not applicable to monitoring only permit conditions)
 - (1) A multiple dilution test shall be performed for both test species within 30 calendar days of becoming aware the regularly scheduled WET test exceeded a TU_c limit, and once every two weeks thereafter until one of the following conditions are met:
 - i. Three consecutive multiple-dilution tests are below the TU_c limit. No further tests need to be performed until next regularly scheduled test period.
 - ii. A total of three multiple-dilution tests exceed the TU_c limit.
 - (2) Follow-up tests do not negate an initial test result.
 - (3) The permittee shall submit a summary of all accelerated WET test results for the test series along with complete copies of the laboratory reports as received from the laboratory within 14 calendar days of the availability of the third test exceeding a TU_c limit.
 - (h) TIE/TRE Trigger: The following shall apply upon the exceedance of the TU_c limit in three accelerated follow-up WET tests. The permittee should contact the Department within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact the Department upon the third follow up test exceeding a TU_c limit, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE within 60 calendar days of the date of the automatic trigger or the Department's direction to perform either a TIE or TRE. The plan shall be based on EPA Methods and include a schedule for completion. This plan must be approved by the Department before the TIE or TRE is begun.
2. Spills, Overflows, and Other Unauthorized Discharges.

Any spill, overflow, or other discharge(s) not specifically authorized above are unauthorized discharges. Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.

D. SPECIAL CONDITIONS (CONTINUED)

3. Electronic Discharge Monitoring Report (eDMR) Submission System

(a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. Regarding Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.

Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:

- (1) Schedule of Compliance Progress Reports;
- (2) Any additional report required by the permit excluding bypass reporting.

After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.

(b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:

- (1) General Permit Applications/Notices of Intent to discharge (NOIs);
- (2) Notices of Termination (NOTs);
- (3) No Exposure Certifications (NOEs);
- (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
- (5) Bypass reporting.

(c) Electronic Submission: access the eDMR system, via: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.

(d) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective.

4. Stormwater Pollution Prevention Plan (SWPPP).

The facility's SIC code is found in 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(2) and hence shall continue to implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf. The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was ineffective at providing the necessary protections for which it was designed. Corrective action describes the steps the facility took to eliminate the deficiency. The SWPPP must include:

- (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
- (b) A map with all outfalls and structural BMPs marked.
- (c) A schedule for at least once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
 - (1) Operational deficiencies must be corrected within seven (7) calendar days.
 - (2) Minor structural deficiencies must be corrected within fourteen (14) calendar days.
 - (3) Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) must be reported as an uploaded attachment through the eDMR system with the DMRs. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. If required by the Department, the permittee shall work with the regional office to determine the best course of action. The permittee should consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
 - (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs, and kept with the SWPPP. Additionally, corrective action of major structural deficiencies shall be reported as an uploaded attachment through the eDMR system with the DMRs.

D. SPECIAL CONDITIONS (CONTINUED)

- (5) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
 - (6) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department personnel upon request. Electronic versions of the documents and photographs are acceptable.
 - (d) A provision for designating an individual to be responsible for environmental matters and a provision for providing training to all personnel involved in housekeeping, material handling (including but not limited to loading and unloading), storage, and staging of all operational, maintenance, storage, and cleaning areas. Proof of training shall be submitted upon request by the Department.
5. Site-wide minimum Best Management Practices (BMPs). At a minimum, the permittee shall adhere to the following:
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, and thereby prevent the contamination of stormwater from these substances.
 - (b) Ensure adequate provisions are provided to prevent and to protect embankments from erosion.
 - (c) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (d) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Spill records should be retained on-site.
 - (e) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (f) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.
6. Stormwater Benchmarks. This permit stipulates pollutant benchmarks applicable to your stormwater discharges.
- (a) The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of the SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce the pollutant in your stormwater discharge(s).
 - (b) Any time a benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the Department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.
7. Petroleum Secondary Containment.
- Before releasing water accumulated in petroleum secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen to protect the general criteria found at 10 CSR 20-7.031(4).
- (a) If odor or sheen is found, the water shall not be discharged without treatment and shall be disposed of in accordance with legally approved methods, such as being sent to an accepting wastewater treatment facility.
 - (b) If the facility wishes to discharge the accumulated stormwater with hydrocarbon odor or presence of sheen, the water shall be treated using an appropriate removal method. Following treatment and before release, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in the tables in 10 CSR 20-7.031 before discharge is authorized. Records of all testing and treatment of water accumulated in secondary containment shall be available on demand to the Department. Electronic records retention is acceptable.
8. Oil/Water Separators. This site operates oil water separator tank(s) for the treatment of wastewater and falls under 10 CSR 26-2.010(2)(B). OWS, as disclosed by the permittee, serving outfall #020 are hereby authorized and shall be operated per manufacturer's specifications. The specifications and operating records must be made accessible to Department staff upon request. Oil water separator sludge is considered used oil; sludge must be disposed of in accordance with 10 CSR 25-11.279.

D. SPECIAL CONDITIONS (CONTINUED)

9. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with RSMo 644.051.16, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Clean Water Act Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2), if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.
10. All outfalls and permitted features must be clearly marked in the field.
11. This permit does not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8., and are land applied in accordance with the exemption.
12. **Changes in Discharges of Toxic Pollutant.**
In addition to the reporting requirements under 40 CFR 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
 - (1) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (i) One hundred micrograms per liter (100 µg/L);
 - (ii) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (iii) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (iv) One milligram per liter (1 mg/L) for antimony;
 - (v) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (vi) The notification level established by the Department in accordance with 40 CFR 122.44(f).
 - (2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (i) Five hundred micrograms per liter (500 µg/l);
 - (ii) One milligram per liter (1 mg/l) for antimony;
 - (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - (iv) The level established by the Director in accordance with 40 CFR 122.44(f).
13. Report as no-discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred. Stormwater outfalls #007, #008, #011, and #017 have steam condensate discharges; steam condensate discharges from these outfalls does not trigger required sampling of stormwater.
14. **Reporting of Non-Detects.**
 - (a) Compliance analysis conducted by the permittee or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, Section A, #4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory established reporting limit (RL) are used interchangeably in this permit.
 - (b) The permittee shall not report a sample result as “non-detect” without also reporting the MDL. Reporting “non-detect” without also including the MDL will be considered failure to report, which is a violation of this permit.
 - (c) For the daily maximum, the permittee shall report the highest value; if the highest value was a non-detect, use the less than “<” symbol and the laboratory’s highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
 - (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as “<#” for the average as indicated in item (c).
15. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).
16. This permit does not cover land disturbance activities.

D. SPECIAL CONDITIONS (CONTINUED)

17. Subsurface Domestic Wastewater System(s).
 - (a) Domestic subsurface dispersion system(s) under this permit are deemed Class V well(s). All Class V wells shall comply with the reporting requirements of 40 CFR 144.26; an inventory form shall be submitted to the Department of Natural Resources' Missouri Geological Survey. Only one submittal is required for the life of the Class V well.
 - (b) The facility shall maintain all service and maintenance records for a period of at least five years. These records shall be made available to Department personnel upon request.
 - (c) The permittee shall develop, maintain, and implement an Operation and Maintenance (O&M) manual. The manual must include all necessary items to ensure the operation and integrity of the waste handling system, including key operating procedures, an aerial or topographic site map with the feature outlined, and a brief summary of the operation of the facility. The O&M manual shall be made available to the operator. The O&M manual shall be reviewed and updated at least every five years and be made available to Department personnel upon request.
 - (d) Subsurface land application shall not occur within 100 feet of any well, sinkhole, or losing stream. All systems shall act as a no discharge system and shall not allow effluent to surface, reach waters of the state, effect a stream, or effect any nearby buildings or dwellings.
 - (e) Access to subsurface distribution areas must be controlled to prevent damage from heavy vehicles, livestock, or digging.
18. This permit does not authorize the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course. The facility must contact the U.S. Army Corps of Engineers (Corps) to determine if a CWA §404 Department of Army permit or §401 water quality certification is required for the project.
19. Renewal Application Requirements.
 - (a) This facility shall submit an appropriate and complete application to the Department no less than 180 days from the expiration date listed on page 1 of the permit.
 - (b) Application materials shall include complete Form A, Form C, and Form D for outfall #020. If the form names have changed, the facility should ensure they are submitting the correct forms as required by regulation.
 - (c) The facility must sample each stormwater outfall and provide analysis for, at a minimum, every parameter contained in the permit at any outfall for the site in accordance with 10 CSR 20-6.200(2)(C)1.E(I) and (II). The facility must also obtain analytical results for all parameters listed in the 2020 EPA consent decree for each of the stormwater outfalls.
 - (d) The facility may use the electronic submission system to submit the application to the Program, if available.
 - (e) This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.
 - (f) The facility will submit the most recent version of the SWPPP.
 - (g) Hydrant flushing discharges shall be monitored and either contained to prevent discharge to surface waters, or treated to remove chlorine if the flushing results in or has the potential to result in a discharge to any stream. Hydrant flushing discharges shall be recorded and submitted with the next permit renewal application. The information to be included with the permit application, at a minimum, shall include, the date and volume of the hydrant(s) discharges. The permit renewal application shall contain a map of all hydrants on site and a list of UTM's.
 - (h) Air conditioner condensate discharges will be enumerated, and information for each will be supplied with the renewal materials. Daily volume, average days/year of flow, a map of all air condensate discharge locations, pollutants, treatments installed, and location of each in UTM's. Any other information the facility deems appropriate should also be submitted, such as contaminant concentrations.
 - (i) The facility will submit Forms C and D for pollutants of concern for outfall #018.
 - (j) Submit all sampling results (electronic is preferred) conducted under the terms and conditions of the 2020 EPA consent decree.
 - (k) Submit copies (electronic is preferred) of all correspondence with the EPA for the term of the permit.

E. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to Sections 621.250 and 644.051.6 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0002402
DYNO NOBEL INC. (CARTHAGE PLANT)

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified for less.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.] a factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

PART I. FACILITY INFORMATION

Facility Type: Industrial – Major, Primary, Categorical
 SIC Code(s): 2892
 NAICS Code(s): 32590
 Application Date: 10/06/2017
 Modification Date: 09/01/2017
 Expiration Date: 03/31/2018
 Last Inspection: 08/11/2014 to 08/14/2014 (EPA); 02/06/2018 (permit writer)

FACILITY DESCRIPTION:

Explosive manufacturing: dynamite, emulsion explosives, cast booster explosives, nitrate esters, mixed acids, denitrated sulfuric acid, and ammonium nitrate. This facility is also a distribution point for blasting agents, caps, and initiators. The charter number for the continuing authority for this facility is F00276893; this number was verified by the permit writer to be associated with the facility and matches the continuing authority reported by the facility. A major rating worksheet was completed July 2020, and a finding of “major” was continued for this facility.

Dyno Nobel specializes in the manufacturing of explosives such as dynamite, emulsion explosives, and cast boosters. Two boilers powered with natural gas (#2 oil is provided as a backup power source) are used to generate and provide steam to many of the processes as a power and heat source. The boiler blow-down water is pH (hydrogen ion activity) adjusted with 70 percent(%) sulfuric acid solution prior to discharge to outfall 020. Two onsite groundwater wells supply water to the boilers, for cooling water purposes, cleaning activities, and domestic uses; however, the employee drinking water is provided in bottles. Domestic sewage is reported by the facility to be disposed in a number of onsite septic tank systems (Class V Injection Wells).

The plant was originally constructed in the early 1900s and has had a number of ownership and production changes over the years. A majority of the facility was lost to fires and explosions in the mid-1960s and then rebuilt. The facility occupies approximately 1,500 acres of land and roughly 423 of those acres are utilized for industrial activities.

WASTEWATER PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#020 (new)	unknown	0.3456 MGD	oil/water separator, scrubber, trickling filter, settling tank, granulated activated carbon	wastewater: subsurface collection system to treatment plant; non-contact cooling water, laundry wastewater, boiler blowdown, and explosives manufacturing

PROCESSES AND PURPOSES:

The primary ingredients for manufacturing dynamite consist of ammonium nitrate, sodium nitrate, nitroglycerin (NG), ethylene glycol dinitrate (EGDN), wood pulp, flour, guar, fine and course walnut, balsa, starch, cob meal, chalk, calcium carbonate, and sulfur. Mixing of carbonaceous ingredients and nitrates occur in the dope house using an auger system. The carbonaceous materials act as an absorbent to aid in stabilizing NG and EGDN. Ammonium nitrate, sodium nitrate, NG, and EGDN are made onsite. The carbonaceous materials are purchased from an offsite source. Wastewater generated from cleaning floors in the dope house and other activities around the dope house is captured and pumped into a tanker truck and sold to farmers as a fertilizer or disposed by other means. The wastewater was previously discharged into two holding ponds that were operated in series. The holding ponds discharged through outfall #01G in the past. The facility eliminated outfall #01G and now the wastewater is captured. The facility should contact the regional office to determine if a closure plan is required for any unused holding structures. Transportation hods are used to transport dynamite and dynamite ingredients around the facility. Hods are defined as small carts used to transfer goods. Damaged hods in need of repair are sent to a building to be washed prior to repair.

The facility has installed a concrete berm to contain the dry dynamite materials at the dope house since the EPA visit. The image on the left shows the exterior of the dope house during the 2014 EPA site visit; the photo on the right is from the permit writer's February 2018 visit.



NAL is ammonium nitrate (AN) liquor, 83%. NAL is an oxidizer, and decomposes into nitrogen oxides (NOX), ammonia (NH₃), and nitric acid (HNO₃). Ammonium nitrate is formed by mixing anhydrous ammonia with spent nitric acid to make 86% ammonium nitrate solution. The holding tanks that store the solution are kept hot using noncontact steam to prevent solidification. The ammonium nitrate solution proceeds through a falling film evaporator to become concentrated. The ammonium nitrate concentrate is formed into granular ammonium nitrate using mixing tanks and other ingredients such as stearic acid, zinc oxide, and diatomaceous earth. The outer sleeves of the mix tanks are cooled with single pass-through noncontact cooling water, directed to outfall #020. Boiler blowdown from this activity is discharged through outfall #020 as well. Sodium nitrate is formed by mixing sodium hydroxide solution with acetic and nitric acid in building #s B32 and B33.

The NG and EGDN are formed by mixing nitric acid and oleum with glycerin or ethylene glycol in reactor vessels (nitrating). The reactor vessels are cooled with noncontact magnesium nitrate solution via a heat exchanger that is on a closed loop system. Nitric acid reacts with the glycerin and ethylene glycol to form NG and EGDN while the oleum reduces moisture content. Spent acid from this reaction is transferred to temporary storage tanks and eventually recovered for reuse in the process. The spent acid storage tanks are cooled with noncontact cooling water that is discharged through outfall #020, previously #01F. The facility has drowner tanks containing sodium carbonate solution that can be used to dump the nitrating process in case of an emergency event. Sodium carbonate solution is also used to prewash and transport the unstable form of NG and EGDN to the mix houses where NG and EGDN are recovered from the solution. Each mix house is equipped with exhaust ventilation that travels to wet scrubbers so that contaminants can be removed from the air prior to atmospheric discharge. The wet scrubber water discharge for mix house #1 is pumped to a trickling filter. The trickling filter discharge is sent to outfall #020. Historically, the wet scrubber water discharge for mix house #2 is discharged as outfall #01C, but this discharge was eliminated over 10 years ago. All dynamite ingredients are blended together in the mix houses and sent to the punch house to be packed into sticks.

After NG and EGDN are removed from the sodium carbonate solution, the spent solution is transported to a thermal treatment unit so that the residual NG and EGDN can be destroyed. The solution is stored in two holding tanks that drain into a feeder tank. The feeder tank sends the spent solution through a pressurized thermal treatment unit to destroy the residual explosives. The treated solution is sent to a separate holding tank prior to offsite shipment. The treated water was previously discharged through outfall 001K, but is now disposed offsite at various wastewater treatment facilities as non-hazardous wastewater. .

The facility has a resource recovery system in place to recover acids that are used to manufacture dynamite. Spent nitric and sulfuric acid are transferred to a glass distillation unit where steam is used to evaporate nitric acid from sulfuric acid. The evaporated nitric acid and settled sulfuric acid are captured in storage tanks and either sold as a product to other industry or used to make ammonium or sodium nitrate onsite. The distillation unit noncontact cooling water is sent to outfall #020. The building is also equipped with a noncontact cooling water halo delivery system to cool the acid storage tanks during recovery operations. This cooling water is discharged to outfall #020. The pH (hydrogen ion activity) is checked prior to discharge. The facility also accepts spent acid from other industries to be recovered.

The primary ingredients for manufacturing cast boosters consist of pentaerythritol tetranitrate (PETN) and trinitrotoluene (TNT). PETN is made onsite and TNT is purchased from an offsite source. PETN is formed by mixing pentaerythritol (PE) with nitric acid in reactor vessels (e.g. nitrating). A centrifuge separates the acid and water from the PETN. Spent acid from this reaction is transferred to an acid stabilization building where it is recovered and used to make ammonium nitrate. The PETN is boxed with 10% moisture and carted to the cast building to be used as an ingredient to make cast boosters.

TNT and PETN are proportioned into kettles and cooked into a molten state. The molten product is injected into plastic cups and allowed to harden. The hardened mold is used as a booster for chub emulsions or other similar types of explosives. The cast building is equipped with floor drains that travel to one of two filtering units. Spent filters are shipped offsite as a hazardous waste while any liquids captured are sent to the acid stabilization building to be recovered and reused onsite. Internal wash water is also captured and mixed with nitric acid to destroy residual explosives. This water is also recovered as a spent acid and reused onsite.

The primary ingredients for manufacturing emulsion explosives consist of mineral oil, ammonium nitrate, sodium nitrate, amber wax, and paraffin wax. The waxes are heated to prevent solidification and then blended in proportion with oxidizers to make emulsion explosives. The emulsion is sent through a paper wrapping process, cooled on a conveyor line, boxed, and palletized for offsite shipment. The paper wrap emulsion building is power washed with hot water. This water is captured with floor drains and transferred to a holding tank. The contents of the holding tank are trucked to the chub emulsion explosives building for wastewater treatment and offsite shipment. This wastewater is no longer permitted to discharge. Noncontact cooling water is used to cool hydraulics in the paper wrap emulsions building. This water was historically discharged to a ditch outside of the building. The discharge of non-contact cooling water from the paper wrap emulsion building was not identified in the facility's previous permit as an outfall point, but has been identified on the application for permit renewal as outfall #011. Process changes have eliminated this wastewater discharge. Outfall #011 is now a stormwater outfall.

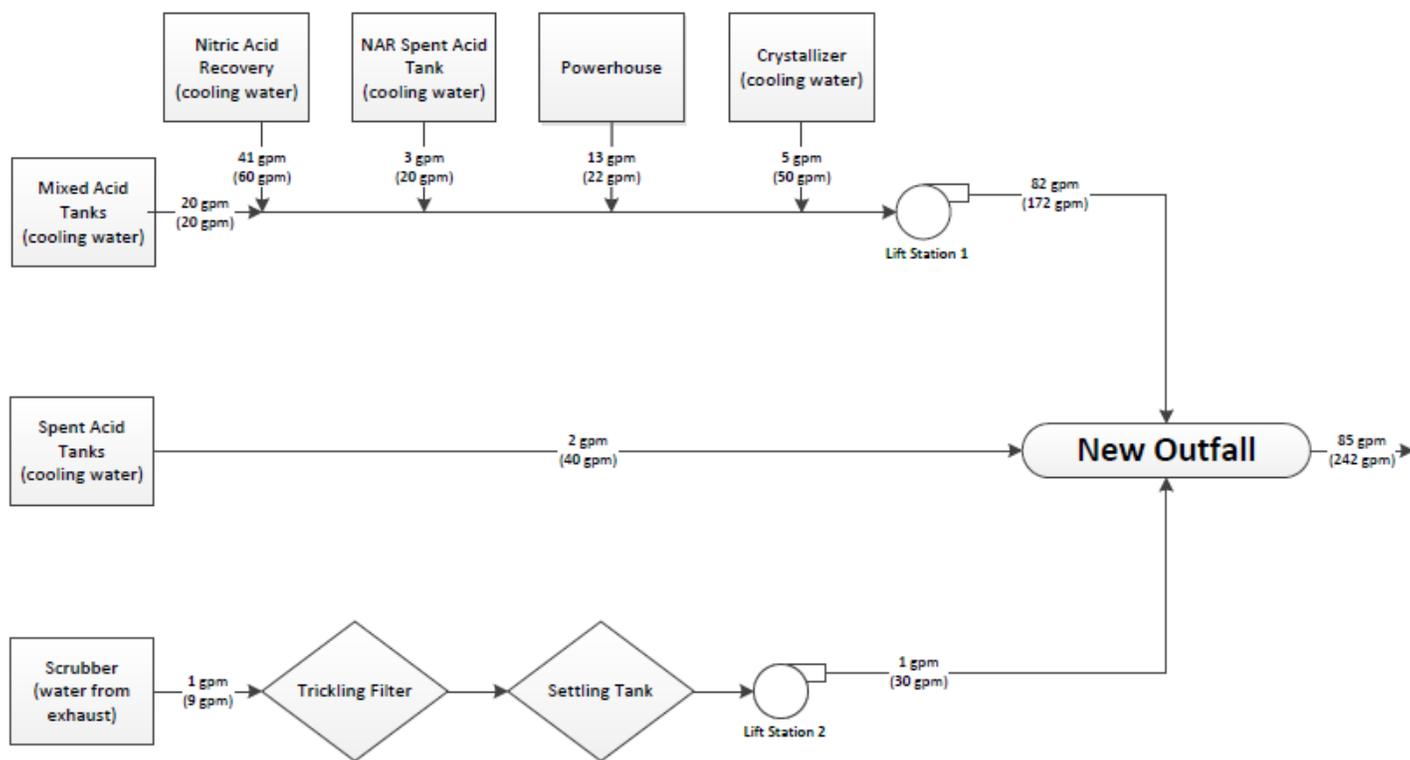
The chub emulsion explosives process is similar to the paper wrap emulsion process except the blended emulsion is injected into plastic tubular sleeves instead of paper wrap. A contact cooling water mist is used at the injection point. Contact cooling water is also used to transport the tubular explosives down a trough to the other end of the building for packaging. Some of the packaged chub emulsions are transported to another area of the facility so that detonating cords can be attached. Once the cords are attached, the chubs are repackaged to be shipped offsite. Contact cooling water for the chub emulsion process is recirculated within the production facility, and is not permitted for discharge. The floor drains in the circulation cooling tank room drain into a pit where pumps are used to transfer the contact water back into the circulation tank.

Emulsion explosives are water based, which consist of a continuous organic liquid fuel phase and a discontinuous oxidizer phase in the form of dispersed droplets of inorganic oxidizer solution. Emulsion phases are most easily handled (and particles can more easily be added and mixed uniformly throughout) when hot, such as at formulation temperatures (generally 70 °C/158 °F or higher). This is particularly the case if the emulsion phases contain waxes as a part of the fuel phase that increase in viscosity upon cooling. Preferred liquid fuels are mineral oil, No. 2 fuel oil, paraffin waxes, microcrystalline waxes, and mixtures thereof. Aliphatic and aromatic vitro-compounds and chlorinated hydrocarbons also can be used. Mixture of any of these can be used.

Wash water from and other parts of the chub emulsion building is captured and transferred to a treatment system. The wash water goes through a clarifier for solids separation. Liquids and sludge from the clarifier are transferred and stored in separate tanks for off-site disposal. Wastewater from paperwrap is filtered through a coarse particulate filter and liquids are transferred and held in holding tank(s) prior to off-site disposal. The solids accumulated in the coarse particulate filter are also transported off-site for disposal.

WATER BALANCE DIAGRAM FOR OUTFALL #020:

Dyno Nobel: New Outfall Flow Diagram



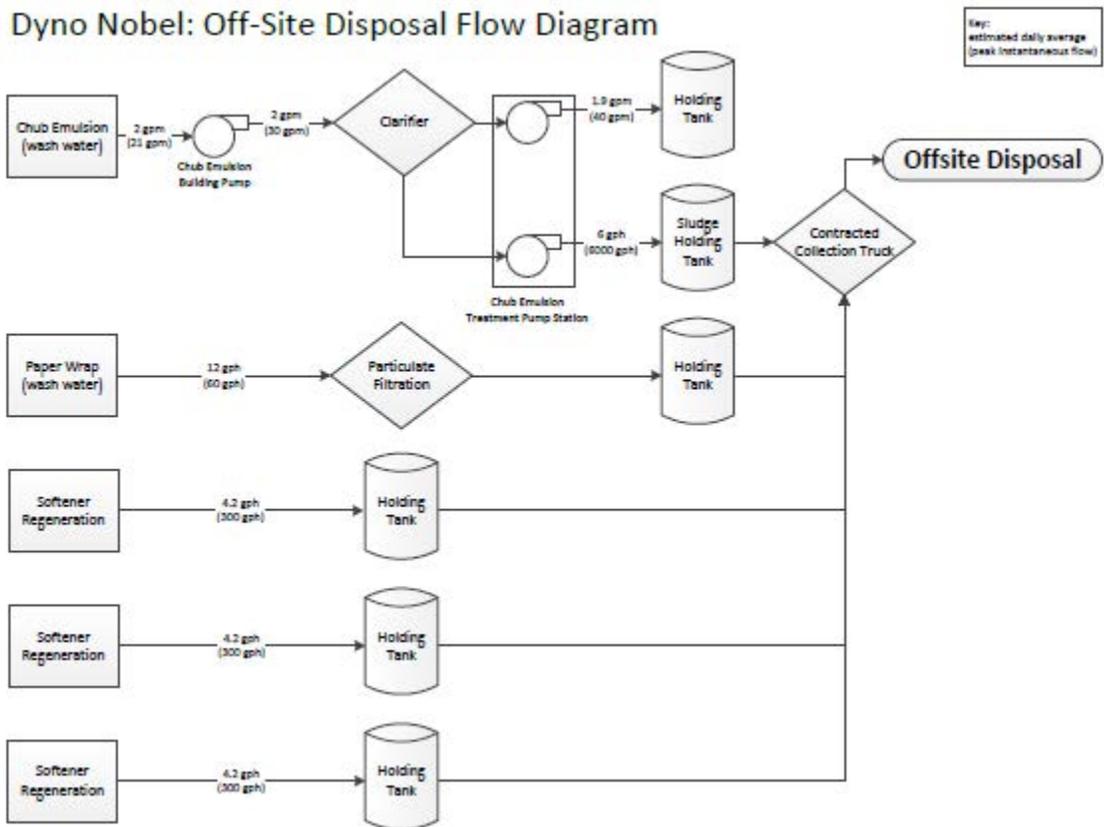
The facility has installed a treatment system and most wastewater now flows into new outfall #020. The electronic discharge monitoring reports were reviewed for the last five years. While exceedances were noted, they are being addressed by installing a new treatment system and combining wastewater outfalls at new #020.

Historic outfall #003 received laundry wastewater, reverse osmosis reject and blowdown, non-contact cooling water (from mixed acid tanks, nitric acid recovery (NAR), crystallizer, and powerhouse buildings), boiler blowdown from NAR, and process wastewater from outfall #010. In an email dated 11/21/2017, the facility indicated past high pH exceedances were due to boiler blowdown. The facility disclosed the boiler treatment used is BWT-100B Alkalinity Builder. Non-contact cooling water from the mixed acid tank is pumped to the building where the acid distillation cooling water discharge occurs. Reportedly, the non-contact cooling water is used to cool the mix tanks.

In the prior permit cycle, historic outfall #004 was sampled in what was a newly classified stream, coordinates were updated; outfall #004 was moved to sample prior to discharge into classified waterbodies. Previous permits listed outfall #004 a receiver of outfall #003 and several other wastewater streams. The burning ground is found in former outfall #004's watershed; it is currently being cleaned up under supervision the DNR Hazardous Waste Program. There are also active and inactive solid waste management activities in this subwatershed. Stormwater monitoring is meant to assure remedial actions are adequately protective of the environment.

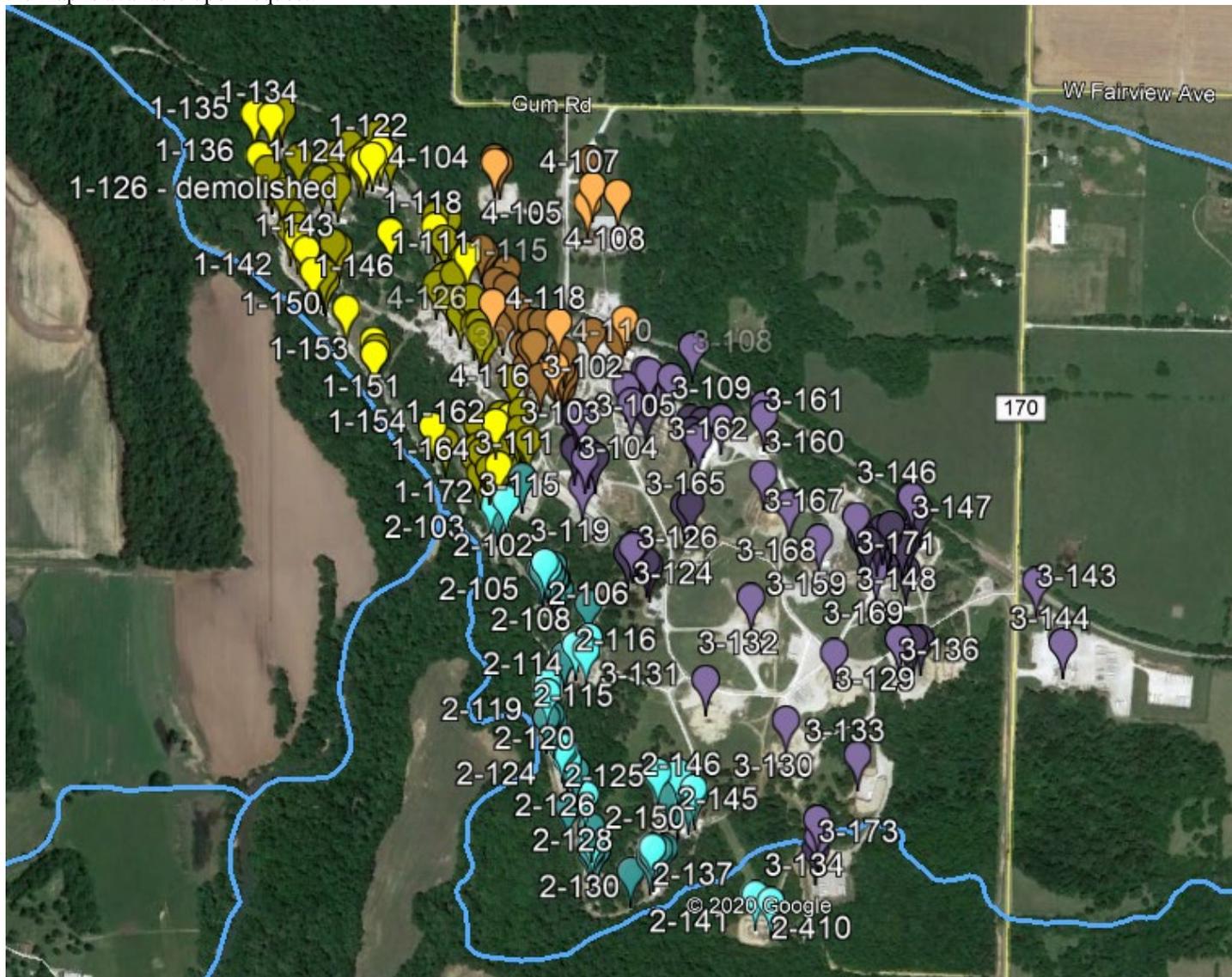
DISCHARGES NO LONGER AUTHORIZED:

Dyno Nobel: Off-Site Disposal Flow Diagram



OVERALL MAP:

The facility is divided into four general areas; Zone 1 (yellow), Zone 2 (teal), Zone 3 (purple), and Zone 4 (gold). A digital version of the map is available upon request.



Site Bldg. No.	Location	Alt. Name	waste water type	gallons per day (gpd)	Notes
-	Fuel Tank				
-	Spent Acid Building				
-	Empty Trailers	Empty Trailers			
-	Hydrants	-	non-process wastewater	82,000	annual test discharge
1-101	Shell House	Shell House	steam condensate		
1-102	Shell House Wax Tanks	Wax Tanks			
1-103	Shell House MCC	-			
1-104	Shell House Bathroom	-	domestic		
1-105	Combined Shop	Combined Shop	steam condensate + lye	4,320	French drain
1-106	Weld Shop	Weld Shop			
1-107	Locy Shop	Locy Shop	domestic		
1-108	Combined Shop Shed	-			
1-109	Locy Shop Bathroom	-	domestic		
1-110	Yard Shop	Yard Shop			
1-111	Old Dope House	-			
1-112	Barrel Storage	Barrel Storage			
1-113	XLE Building	XLE			
1-114	Mule Barn	Mule Barn			

Site Bldg. No.	Location	Alt. Name	waste water type	gallons per day (gpd)	Notes
1-115	Plastic Shell Warehouse	Plastic Shell Warehouse			
1-116	Lubrication Oil Shed	-			
1-117	Universal Waste Shed	-			
1-118	Asbestos Storage Shed	-			
1-119	Fueling Station	Fueling Station	fueling - stormwater runoff		
1-120	Canister Warehouse	Canister Warehouse			
1-121	Cast Booster Production	Cast Booster Production	domestic; steam cond. + lye; AC cond.	2,880; 201	
1-122	Meltpour Scrubber	-			
1-123	Cast Booster Box End	Cast Booster Box End	domestic; AC	3.37	seasonal
1-124	Cast Booster Compressor	-			
1-125	Cast Booster Storage Shed	-			
1-126	Cast Booster Maintenance Shop	-			
1-127	PETN Parts Shed	-	AC cond.	5	
1-128	PETN Nitrator Tank Farm	PETN Nitrator Tank Farm			
1-129	ASB	ASB			
1-130	PETN Nitrator Heater House	-			
1-131	PETN Nitrator	PETN Nitrator	steam cond. + lye; AC recirc	720; 50	
1-132	#5 Magazine	#5 Magazine			
1-133	#4 Gelly Spare Parts	-			
1-134	#4 Gelly	#4 Gelly			
1-135	#4 Gelly AC House	-			
1-136	#1 Bohlman Spare Parts	-			
1-137	#1 Bohlman AC/Bathroom	-	domestic; AC single pass	400	
1-138	#1 Bohlman	#1 Bohlman	steam cond. + lye	720	
1-139	#1 Bohlman Storage	-			
1-140	#5 Gelly	#5 Gelly			
1-141	#5 Gelly AC	-	AC single pass		
1-142	#5 Gelly Storage	-			
1-143	#5 Gelly/#1 Mix Bathroom	-	domestic		
1-144	#1 Mix Breakroom	-			
1-145	#1 Mix House	#1 Mix House	steam cond. + lye	11,440	
1-145	#1 Mix House	#1 Mix House	process wastewater	8525	
1-146	#1 Mix AC	-	AC single pass		
1-147	#1 Mix Pollution Pump Shed	-			
1-148	#1 Mix Deba House	-			
1-149	#1 Transmission	-			
1-150	Reflo Building	Reflo Building			
1-151	#1 Storehouse Heater House	-			
1-152	#1 Storehouse	#1 Storehouse			
1-153	#1 Storehouse Catch Tank				
1-154	Pollution Water Tank Farm	Pollution Water			
1-155	Spring Pump Station	Spring Pump Station			
1-156	Caustic Tank Farm	Caustic Tank Farm			
1-157	Blend Tank Farm	Tank Farm			
1-158	NG Emergency Generator	-			
1-159	NG Mixed Acid Tank Farm	NG Mixed Acid Tank Farm			
1-160	Continuous Nitrator Control	Instrumentation Control Rm	domestic		
1-161	Tuthill Building	-			
1-162	Blender Building	Blender Building			
1-163	MTN Blender Building	-			
1-164	NG Spare Parts	-			
1-165	Continuous Nitrator	-	non-contact cooling water		
1-166	NG Soda Building	NG Soda			
1-167	New Prewash	Nitrator			
1-168	Refrigeration Building	-			
1-169	Continuous Nitrator Heater House	-	steam cond. + lye	2,880	
1-170	Cont. Nitrator Hydraulic House	-			

Site Bldg. No.	Location	Alt. Name	waste water type	gallons per day (gpd)	Notes
1-171	Old Prewash	Spent Acid			
1-172	Spent Acid Building	Spent Acid Building			
1-173	Old Prewash Heater House	-			
1-174	Prewash Catch Tank House	-			
1-175	Spent Acid Pumping House	-			
1-176	Spent Acid Drowner	-			
1-177	Spent Acid Long Catch Tank	-			
1-178	Spent Acid Heater House	-			
1-179	Collector Pump House	-			
1-180	Prewash Heater House	-			
2-101	Thermal Treatment Unit	Thermal Treatment Unit	process wastewater	0	shipped off-site
2-102	#2 Storehouse Heater House	-			
2-103	#2 Storehouse	-			
2-104	#2 Storehouse Catch Tank	-			
2-105	#2 Mix DEBA/Water Softener	-			
2-106	#2 Mix Water Recovery	-			
2-107	#2 Mix Breakroom	-	domestic		
2-108	#2 Mix AC House	-	AC single pass		not in operation
2-109	Outfall #001C	-			
2-110	#2 Mix Lawrence Pump House	-			
2-111	#2 Mix House	#2 Mix House			not in operation
2-112	#2 Mix Motor Room	-			
2-113	#2 Mix Storage Shed	-			
2-114	#1 Gelly	#1 Gelly	steam cond. + lye	720	
2-115	#1 Gelly AC House	-	AC single pass	400	seasonal
2-116	#1 Gelly Bathroom	-	domestic		
2-117	#1 & #2 Gelly Parts House	-			
2-118	Capwell Storage	-			
2-119	#2 Gelly	#2 Gelly	steam cond. + lye	720	no exposure
2-120	#2 Gelly AC House	-	AC single pass; steam cond.	400	
2-121	Outfall #01H	-			
2-122	Dynamite Hod Wash Building	Dynamite Hod Wash			
2-123	Dynamite Mechanic Shop	Dynamite Mechanic Shop			
2-124	Mechanical Storage	-			
2-125	#2 Hall Parts House	-			
2-126	#2 Hall House	#2 Hall House	steam cond. + lye	720	not in operation
2-127	#2 Hall AC House	-	AC single pass		not in operation
2-128	#2 Hall & #3 Gelly Bathroom	-	domestic		
2-129	#3 Gelly Storage Building	-			
2-130	#3 Gelly	#3 Gelly	stormwater		formerly steam condensate; no stormwater exposure
2-131	#3 Gelly Supplies Shed	-			
2-132	#3 Gelly Parts House	-			
2-133	#3 Gelly AC House	-	AC single pass; steam cond.	400	seasonal
2-134	#2 Bohlman Bathroom	-	domestic		
2-135	#2 Bohlman Supplies Shed	-			
2-136	#2 Bohlman	#2 Bohlman			formerly steam condensate; no industrial stormwater exposure
2-137	#2 Bohlman Compressor	-	AC cond.	37.7	seasonal
2-138	#2 Bohlman Parts House	-			
2-139	#2 Bohlman AC House	-	AC single pass; steam cond.	400	seasonal
2-140	Decon Oven Motor Room	-			
2-141	Decon Oven	Decon Oven			
2-142	Paperwrap Breakroom	-	domestic; AC cond.	200	
2-143	Oxidizer Tank Farm	-			
2-144	Fuel Tank Farm	-			
2-145	Wax Tank Farm	Wax Tank Farm			

Site Bldg. No.	Location	Alt. Name	waste water type	gallons per day (gpd)	Notes
2-146	Paperwrap	Paperwrap	non-contact cooling water, steam cond. + lye, AC Recirc	1,440; 1,440; unknown	
2-147	Paperwrap Mechanic's Shop	-			
2-148	Paperwrap Parts Shed	-			
2-149	SPCC	-			
3-101	Powder Lab Storage	-	domestic		
3-102	Powder Lab	-	domestic		
3-103	Coated Ingredients Storage	Coated Ingredients Storage			
3-104	Crystallizer	Crystallizer	wastewater; non-contact cooling	72,000	
3-105	SN Storage	SN Storage			
3-106	SN Heater House	-			
3-107	Crystallizer Heater House	-			
3-108	Lab Magazine	-			
3-109	Anhydrous Ammonia Storage	Anhydrous Ammonia			
3-110	NAL Tank Farm	NAL Tank Farm			
3-111	Cotton House Warehouse	Cotton House Warehouse			
3-112	Cotton Heater House	-			
3-113	Cotton House	-	AC single pass	50	
3-114	Dope House Breakroom	-			
3-115	Dope House	Dope House	steam cond. + lye	4,320	shipped off-site or sold as fertilizer
3-116	Dope House Locker Room	-			
3-117	Dope House Storage Shed	-			
3-118	Dope House Motor Control	-			
3-119	Dope House Warehouse	Dope House Warehouse			
3-120	Dope House Bathroom	-	domestic		
3-121	Dope House Hydraulic Room	-			
3-122	FloGel	Flogel			
3-123	FloGel Motor Control	-			
3-124	Schrader	-			
3-125	Schrader AC	-			
3-126	Schrader Storage	-			
3-127	Dynamite Office	Dynamite Office	domestic		
3-128	Dynamite Office Storage	-			
3-129	Magazine #1	Magazine #1			
3-130	Magazine #2	Magazine #2			
3-131	Magazine #3	Magazine #3			
3-132	Magazine #4	Magazine #4			
3-133	Old Transfer Dock	Old Transfer Dock			
3-134	Transfer Dock Bathroom	-	domestic		
3-135	Transfer Dock	Transfer Dock			
3-136	Cap Magazine D	Cap Magazine A-D			
3-137	Cap Magazine C	Cap Magazine A-D			
3-138	Cap Magazine B	Cap Magazine A-D			
3-139	Cap Magazine A	Cap Magazine A-D			
3-140	Hazardous Magazine	Hazardous Magazine			
3-141	Concrete Silo	-			
3-142	Magazine Office	-	domestic		
3-143	DNTI Office	-	domestic		
3-144	DNTI Shop	DNTI Shop	domestic		
3-145	Chub Warehouse	Chub Warehouse			
3-146	Chub Sodium Nitrite Shed	-			
3-147	Chub Storage Shed	-			
3-148	Chub Production	Chub Production	domestic; steam cond. + lye; AC recirc	2,880; 400	
3-149	Oxidizer Warehouse	-			
3-150	Chub Mineral Oil Tank Farm	-			
3-151	Chub Cooling Bathroom	-	domestic		

Site Bldg. No.	Location	Alt. Name	waste water type	gallons per day (gpd)	Notes
3-152	Chub Production Bathroom	-	domestic		
3-153	Chub Breakroom	-	domestic		
3-154	SN Motor Room	-	AC Recirc	5	
3-155	Oxidizer Tank Farm	Oxidizer Tank Farm			
3-156	Chub Air Compressor	-			
3-157	Chub Boiler	-			
3-158	Chub Boiler Shed	-			
3-159	Chub Pack-End	Chub Pack End	domestic; AC cond	200	
3-160	Pallet Warehouse	Pallet Warehouse			
3-161	Bessemer Warehouse	Bessemer Warehouse			
3-162	Box House East Storehouse	-			
3-163	Box House	-	domestic; steam cond.	0	
3-164	Box House West Storehouse	Box House With Storehouse			
3-165	Box House AC	-	AC window unit	5 gpd	
3-166	Box House Shed	-			
3-167	Burning Grounds	Burning Ground			
3-168	Burning Ground Shed	-			
4-101	Guard House	Entrance	domestic		
4-102	Dynosies Warehouse	Dynosies Warehouse			
4-103	Dynosies Office	-	domestic; single pass AC	150	
4-104	Dynosies Shed	-			
4-105	Main Office	Office	domestic		
4-106	Main Conference Room	-			
4-107	Northern Offices	-	domestic		
4-108	Office Storage Shed	-			
4-109	Eastern Offices	-			
4-110	Cafeteria/Lean Conference Room	Cafeteria	domestic; AC condensate	150	
4-111	Men's/Women's Change House	Change House	domestic; AC condensate	200	
4-112	Plant Laboratory/Nurses Station	Lab/Nurse	domestic		
4-113	Power House	Power House	wastewater	25,000	
4-113	Power House	Power House	domestic; AC cond.	50	
4-114	Laundry	New Power House	wastewater	22,800	carbon filtration system
4-114	Power House Addition	Addition	domestic; AC recirc		
4-115	Power House Storage Shed	-			
4-116	Power House Compressor Shed	-	domestic		
4-117	#2 Well House	-	domestic		
4-118	#25 Warehouse	#25 Warehouse			
4-119	Old Soda Warehouse	Old Soda Warehouse			
4-120	Paint Shed	Paint Shed			
4-121	Oak Warehouse	Oak Warehouse			
4-122	Paint Shop	Paint Shop			drains have been removed
4-123	Electrical Shop	Electrical Shop			
4-124	Electrical Shed	-			
4-125	Store Room	Store Room			
4-126	Carpenter's Annex	-			
4-127	Slitter/Paper Warehouse	Slitter/Paper Warehouse			
4-128	Nitric Acid Recovery NAR	Acid Distillation	non-contact cooling water		pipd
4-129	Spent Acid	Spent Acid			
4-130	Acid Area Office	-			
4-131	Acid Area Storage Shed	-			
4-132	Mixed Acid Tank Farm	Mixed Acid Tank			
4-133	Water Tower	Water Tower	non-process wastewater		drinking water
4-134	Low Water Tank	Water Tank	non-process wastewater		drinking water - overflowed monthly
4-135	Fire Pump House				

STEAM CONDENSATE DISCHARGES:

This facility uses steam heat to prevent explosions in the manufacturing buildings as an alternative to using conventional heating methods which have open flames or sparks. The facility initially disclosed 14 steam discharges; two were stated to be insignificant (#S13 and #S17). Some steam discharges appear discolored. Because the steam heat is not completely recirculating, the end of the lines discharge waste steam and steam condensate in some cases. The map identifies locations of steam discharges as S##. Because the facility adds sodium hydroxide (lye/caustic soda) to the steam pipes, the steam discharges have the potential to raise the pH of the condensate discharge or stormwater which contacts the discharge. Steam discharge #S15 is such a significant discharge, a channel has been furrowed into the earth. The EPA visited the site in August 2019, and the flow was still significant. This permit adds monitoring and a schedule of compliance for the new steam condensate outfalls; temperature monitoring is being included. Dyno will be monitoring, evaluating, and determining an appropriate course of action for each outfall during the compliance period. It is understood that a permit modification to extend the schedule of compliance could be needed depending upon the actions needed to comply with the final effluent limitations.

Historic outfall #011 was characterized as a steam condensate outfall in the previous permit, however, this outfall historically discharged non-contact cooling water. This is a stormwater outfall now and the steam condensate was relabeled as outfall #S18 from building #1-148.

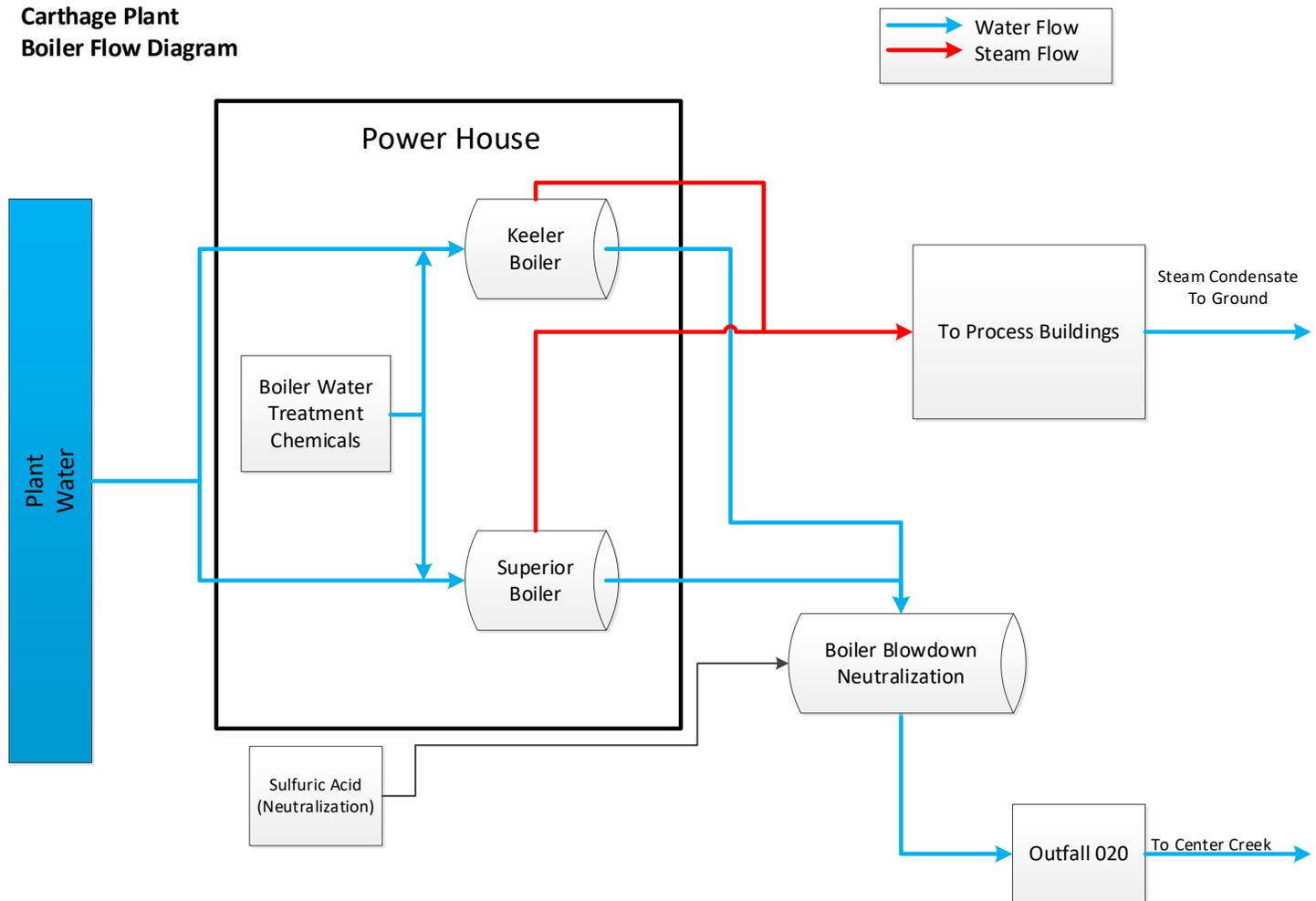
Outfalls #014 (#S03 eliminated), #015 (#S06 eliminated), and #016 (#S07 eliminated) no longer discharge steam condensate. The Facility also disclosed they have no industrial exposure for the stormwater therefore the outfalls were removed from the permit.

Steam discharges not identified in the table below are #S01, #S03, #S04, #S06, #S07, and #S09, were eliminated and no longer discharge, therefore no longer have permission to discharge from those locations.

Location No.	Operation	Average Flow (gpm)	Max. Flow (gpm)	MGD	X =	Y =
S02	#2 Gel	0.50	1.00	0.001440	377866	4111803
S05	#1 Bohlman	0.50	1.00	0.001440	377381	4112772
S08	#1 Mix	1.00	2.00	0.002880	377465	4112619
S10	PETN Nitrator	0.25	0.50	0.000720	377471	4112788
S11	Cast Booster	1.00	2.00	0.002880	377521	4112823
S12	Maintenance Area	1.25	3.00	0.004320	377695	4112577
S13	Shell House	unknown	unknown	unknown	377747	4112502
S14	NG Nitrator Area	0.80	2.00	0.002880	377757	4112266
S15	Dope House	3.00	5.00	0.007200	377960	4112294
S16	Crystallizer	Recycled to Power House, no discharge	n/a	n/a	n/a	n/a
S17	Box House	unknown	unknown	unknown	378140	4112314
S18	Paperwrap	1.00	2.00	0.002880	378100	4111687
S19	Chub Emulsion	1.00	2.00	0.002880	378355	4112120
S20	#5 Gel	0.50	1.00	0.001440	377430	4112699
S21	#2 Storehouse	unknown	unknown	unknown	377569	41112462

STEAM CONDENSATE FLOW DIAGRAM:

**Dyno Nobel Inc.
Carthage Plant
Boiler Flow Diagram**



Steam condensate discharge pH ranges from 5.9 to 9.7 SU in 2019 and 2020; and 4.97 to 8.75 SU according to 2013 data. This data also included the presence of nitrogen and nitrates. According to a proposed modification in 2013, sampling data show biochemical oxygen demand (BOD) was 1.32 mg/L, chemical oxygen demand (COD) was 9.3, and total organic carbon (TOC) was 86.8 mg/L. The application was marked believed absent for many pollutants, and monitoring concluded some parameters were actually absent although sufficiently sensitive analysis was not used.

EPA CONSENT DECREE:

In 2020, the Environmental Protection Agency (EPA) lodged a consent decree (CD) effective May 6, 2020, requiring the facility to install a collection system for most wastewater sources and discharge out a singular outfall. This permit identifies the outfall as #020. Other terms and conditions of the CD required specific monitoring of the stormwater at four locations. The permit writer identifies several other locations where stormwater may be leaving the site. This permit included additional stormwater requirements deemed appropriate under the National Pollutant Discharge Elimination System, and Missouri Clean Water Law. The facility is required to submit all sampling conducted under the terms and conditions of the CD with the application for permit renewal.

STEAM OUTFALL MAP:



STORMWATER:

Historic outfalls #004, #007, #008, #009, and #011; and new outfalls #017, #018, #019, #021, and #022 were defined as stormwater outfalls. Outfall #004 was converted from a wastewater outfall to a stormwater-only outfall. While the permittee has disclosed hydrant flushing, secondary containment drainage, water tank overflow, and steam condensate are discharged at other locations and upstream of these outfalls, the permit writer has determined benchmarks are permissible. Some discharged wastewater has such low volumes the permit writer does not have concern. Secondary containment areas are drained of stormwater only after checking the presence of contaminants.

Stormwater outfalls were added based on several factors; mostly the August 2014 EPA inspection and review of hypsography of the site.

Outfalls #013, #014, #015, and #016 were identified by the facility on June 24, 2020 as having no industrial exposure therefore were removed from the permit.

Outfall #018 was revised in the draft permit during public notice because the facility indicated it was groundwater seepage and not an industrially exposed stormwater outfall. The outfall was not removed to alert inspectors it was not an illicit discharge.

Outfall #019 was removed from the draft permit during public notice because the facility indicated it was actually a steam condensate discharge. The discharge was renumbered as #S21. Because no other information was included, the new outfall was placed in the monthly monitoring table, Tables A-2/A-3 for steam condensate

Outfalls #021 and #022 were implemented to quantify stormwater discharges at the southern-most watershed of the facility where the facility splits the stream. They are near building #3-134 and should represent the discharges adequately from these sections of the facility, located between Magazine #2 and the transfer dock. Outfalls #021 and #022 are on opposite sides of the stream (although the map line appears to be off of the actual channel as identified by satellite imagery).

The permit writer did not add an outfall to the eastern loading area, east of Road 170 (see map below) as it is covered under No Exposure Certificate MO-NX00541.

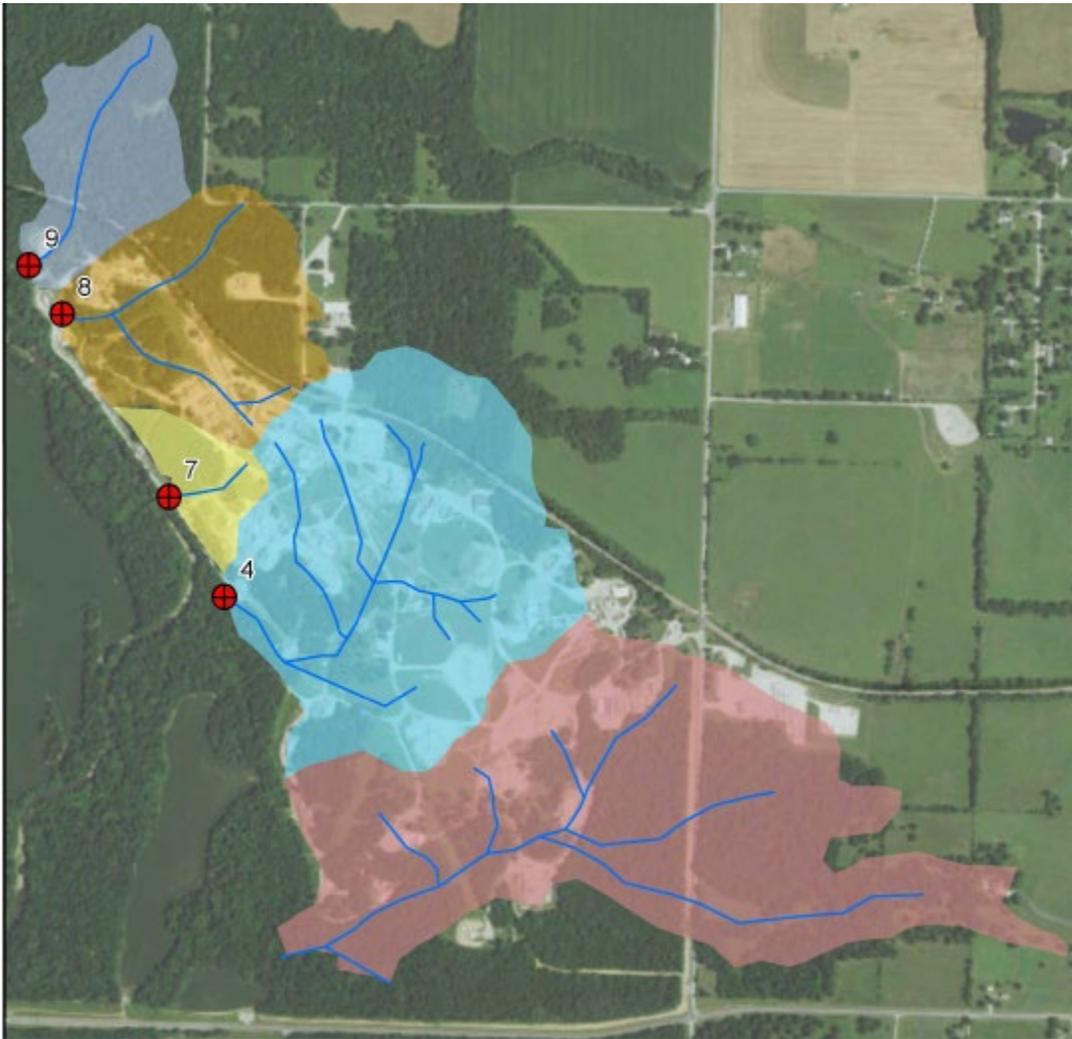
STORMWATER OUTFALLS:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#004 (moved)	unknown	unknown	none	stormwater
#007	unknown	0.808 MGD	none	stormwater
#008	unknown	4.039 MGD	none	stormwater
#009	unknown	2.004 MGD	none	stormwater
#011	unknown	unknown	none	stormwater
#017 (new)	unknown	unknown	none	stormwater
#021 (new)	unknown	unknown	none	stormwater
#022 (new)	unknown	unknown	none	stormwater

The SWPPP identifies minimizing exposure of pollutants in stormwater discharges. The facility has determined large vehicles requiring maintenance will be worked on outside; maintenance will not occur in the rain and a temporary containment will be provided.

The permittee reports pollutants in stormwater are minimized from discharging into the receiving streams by using vegetative buffers which include grasses and woody vegetation. No manufacturing occurs outdoors and some liquid transfer stations occur under cover as well. Dumpsters should remain covered, although during the February 6, 2018 site visit, several dumpsters and roll-off containers were observed uncovered (Dyno reports these inadequacies have since been corrected.). Vegetative buffers may be used for treatment of stormwater.

EPA STORMWATER MAP:



FACILITY STORMWATER OUTFALL MAP:



FIRE HYDRANT FLUSHING:

In an email dated 1/7/2019, the facility disclosed an annual discharge of 41 hydrants on site, each discharging approximately 200 gallons per minute, for about 10 minutes for a total of 82,000 gallons; the flushing of all hydrants is completed at the same time. The source of the fire protection wastewater is from potable water drawn from on-site wells. Additionally, the groundwater may contribute to metals loading of surface waters when discharged.

HVAC (COOLING) CONDENSATE DISCHARGES:

The facility disclosed 37 cooling condensate discharges. These will be classified and observed over the next permit term and additional information is due at renewal.

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO FIRST CLASSIFIED SEGMENT
#020	direct discharge to Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0 mi
#004	direct discharge to East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0 mi
#007	direct discharge to Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0 mi
#008	Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0.03 mi
#009	Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0.1 mi
#010	East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0.25 mi
#011	East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0.05 mi
#012	East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0.1 mi
#017	East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0.7 mi
#018	direct discharge to Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0 mi
#019	direct discharge to Center Creek	P	3203	ALP, GEN, IND, IRR, LWW, SCR, WBC-A	0 mi
#021	direct discharge to East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0 mi
#022	direct discharge to East Fork Center Creek	C	3960	ALP, GEN, HHP, IRR, LWW, SCR, WBC-B	0 mi

12 digit HUC for all outfalls: Webb City – Center Creek 11070207-0607
EDU: Springfield Plateau

n/a not applicable

Classes are representations of hydrologic flow volume or lake basin size as defined in 10 CSR 20-7.031(1)(F). L1: Lakes with drinking water supply - wastewater discharges are not permitted to occur to L1 watersheds per 10 CSR 20-7.015(3)(C); L2: major reservoirs; L3: all other public and private lakes; P: permanent streams; C: streams which may cease flow in dry periods but maintain pools supporting aquatic life; E: streams which do not maintain surface flow; and W: wetland. Losing streams are defined in 10 CSR 20-7.031(1)(O) and are designated on the Losing Stream dataset or determined by the Department to lose 30% or more of flow to the subsurface.

WBID = Waterbody Identification: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 100K Extant-Remaining Streams or newer; data can be found as an ArcGIS shapefile on MSDIS at ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip; New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3. as 100K Extent Remaining Streams.

10 CSR 20-7.031(1)(C)1.: **ALP** = Aquatic Life Protection (formerly AQL); current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-B3 for all habitat designations unless otherwise specified.

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = whole body contact recreation supporting swimming uses and has public access;

WBC-B = whole body contact recreation not included in WBC-A;

SCR = Secondary Contact Recreation (like fishing, wading, and boating)

10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish and drinking of water;

IRR = irrigation for use on crops utilized for human or livestock consumption

LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply, includes aquifers per 10 CSR 20-7.031(5)

IND = industrial water supply

10 CSR 20-7.031(1)(C)8. to 11.: Wetlands (10 CSR 20-7.031 Tables A1-B3 currently does not have corresponding habitat use criteria for these defined uses): WSA = storm- and flood-water storage and attenuation; WHP = habitat for resident and migratory wildlife species; WRC = recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = hydrologic cycle maintenance.

10 CSR 20-7.031(6): **GRW** = Groundwater

20 CSR 20-7.031(4): GEN = general criteria; acute toxicity criteria applicable to all waters even those lacking designated uses

n/a = not applicable

EXISTING WATER QUALITY:

Center Creek (P) 3203 is listed on the 2012 303(d) List of impaired waters. The pollutants are cadmium (S), cadmium (W), and lead (S), with the source of the pollution listed as Tri-State Mining District. The designated use of protection aquatic life and human health – fish consumption (ALP) has been impaired by these pollutants. A Total Maximum Daily Load (TMDL) allocation has been developed for zinc. However, this TMDL does not require Dyno meet a Waste Load Allocation (WLA) for zinc although one may be developed in the future.

303(d) LIST:

Section 303(d) of the federal Clean Water Act requires each state identify waters not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife.

The 303(d) list helps state and federal agencies keep track of impaired waters not addressed by normal water pollution control programs. <http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

- ✓ Applicable. Center Creek (P) (3203) is listed on the 2016 Missouri 303(d) List for cadmium (S), cadmium (W), and lead (S).
- ✓ This facility is not considered to be a source of the above listed pollutants in Center Creek (P) (3203). The TMDL notes Tri-State Abandoned Mine Lands as the source of the impairment.

TOTAL MAXIMUM DAILY LOAD (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. <http://dnr.mo.gov/env/wpp/tmdl/>

- ✓ Applicable. Center Creek (P) (3203) is associated with the 2006 EPA Approved TMDL for zinc.
- ✓ This facility is not considered to be a source of the above listed pollutant in Center Creek (P) (3203). The TMDL notes Tri-State Abandoned Mine Lands as the source of the impairment. However, the facility was not historically testing for zinc but the application materials show zinc is discharging at this facility.
- ✓ The TMDL unit reviewed the Center Creek TMDL for this facility. On 4/24/2015 the TMDL unit indicated the permit for this facility is not required to implement zinc limitations for the TMDL.

DESIGNATION OF WATERS OF THE STATE:

Per Missouri’s technology-based effluent regulations [10 CSR 20-7.015], waters of the state are divided into seven categories [10 CSR 20-7.015(2) through (8)]. If the discharges at the site are stormwater only, or this is a land application only permit, effluent limitations may not be developed based on the designations of the receiving stream, rather are based on a best professional judgment evaluation, which takes the designation and uses of the receiving water body into consideration. Effluent limitations derived on a site specific basis are discussed in PART IV: EFFLUENTS LIMITS DETERMINATIONS.

- ✓ All other waters

MIXING CONSIDERATIONS:

For all outfalls discharging to tributaries and C streams, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent.

RECEIVING STREAM LOW-FLOW VALUES:

RECEIVING STREAMS	LOW-FLOW VALUES			
	1Q10	7Q10	30Q10	60Q10
Tributaries	0	0	0	0
100K Extent-Remaining Stream (C) East Fork Center Creek	0	0	0	0
Center Creek (P) (USGS gaging station 07186400)	17.4 cfs	20.4 cfs	24.1 cfs	28.1 cfs

<https://streamstatsags.cr.usgs.gov/gagepages/html/07186400.htm>

MIXING CONSIDERATIONS TABLE: OUTFALL #020 TO CENTER CREEK

MIXING ZONE (CFS) (CHRONIC) [10 CSR 20-7.031(5)(A)5.A.4.B.(II)(a)]				ZONE OF INITIAL DILUTION* (CFS) (ACUTE) [10 CSR 20-7.031(5)(A)4.B.(II)(b)]			
1Q10	7Q10	30Q10	60Q10	1Q10	7Q10	30Q10	60Q10
4.35	5.1	6.025	7.025	0.43	0.51	0.603	0.703

* ZID cannot be greater than 10x the design flow. The design flow is 0.535 cfs. 0.3456 MGD).

RECEIVING WATERBODY MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time. The previous permit required monitoring upstream and downstream in Center Creek. However, as the newly classified stream bisects the southeastern portion of the facility, and the first receiving stream for the outfalls on the southern part of the facility is now the East Fork Center Creek (100K Extent Remaining Stream). Therefore, upstream on Center Creek is no longer representative of all the discharges from the facility. All compliance must be at the outfall, prior to entering waters of the state.

LAKE NUMERIC NUTRIENT CRITERIA:

Water quality standards per 10 CSR 20-7.031(5)(N) describe nutrient criteria requirements assigned to lakes (which include reservoirs) in Missouri, equal to or greater than 10 acres during normal pool conditions. The Department’s Nutrient Criteria Implementation Plan (NCIP) may be reviewed at: <https://dnr.mo.gov/env/wpp/rules/documents/nutrient-implementation-plan-final-072618.pdf> Discharges of wastewater in to lakes or lake watersheds designated as L1 (drinking water use) are prohibited per 10 CSR 20-7.015(3)(C).

- ✓ Not applicable; this facility does not discharge in a lake watershed.

PART III. RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- ✓ Not applicable; the facility is an existing facility.

ANTIBACKSLIDING:

Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

- ✓ Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
- ✓ Material and substantial alterations or additions to the permitted facility occurred after permit issuance justify the application of a less stringent effluent limitation.
 - Effluent limitations established in this permit reflect the addition of a treatment system and combination of the wastewaters formerly discharged at several other outfalls, into one outfall, #020. Certain outfalls have also ceased discharging. See facility description in the fact sheet for a narrative explanation of changes. Effluent limitations established at historical outfalls have been removed; no discharge is allowed from them.
 - Effluent limitations for steam condensate were reviewed. Steam condensate at #S02 was changed from water quality limits to technology limits. The steam coming from this area is low in flow and discharges to Center Creek where buffering is occurring.
- ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - The previous permit's special conditions required sampling of total petroleum hydrocarbons (TPH) under the decision model to discharge stormwater having a sheen in secondary containment. The special condition has been revised in all permits beginning in 2015 to remove TPH as 40 CFR 136 does not contain any approved methods for the TPH parameter nor are there water quality standards for TPH. This permit requires oil and grease and BTEX (benzene, toluene, ethylbenzene, and xylene) sampling of the potentially contaminated stormwater in secondary containment. The facility need only sample for these constituents prior to release when a sheen or petroleum odor is present.
 - The previous permit special condition stated: "Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label." The permit writer has determined this special condition is outside the scope of NPDES permitting and was removed.
 - The previous permit condition required an "Evaluation and Reduction of the Number of Outfalls. The permittee is required to reduce the number of outfalls at this site to five discharge points or less. Combining outfalls reduces the uncertainty for adequate control of discharges and protection of waters of the state. In addition to combining outfalls, the permittee must install sampling structures prior to discharge into the receiving streams that will allow proper sampling to occur. Effluent limitations must be met prior to entering the receiving streams. These structures will allow the permittee to determine compliance with the permit. The permittee must comply with the following schedule for reduction of outfalls. All reduction and facility upgrades shall be completed as soon as reasonably achievable or no later than five (5) years of the effective date of this permit." The permit writer has evaluated this statement and determined the number of outfalls is not a requirement an NPDES permit can dictate. However, this permit can dictate all samples be representative and sampling occur prior to entry into waters of the state.
 - This permit affords benchmarks to stormwater; the previous permit indicated limits for pH on the stormwater outfalls; however, reasonable potential for the stormwater to cause or contribute to water quality exceedances has not been demonstrated therefore benchmarks for this parameter are applicable.
 - BOD benchmarks established for stormwater were determined to no longer be applicable to this facility's stormwater discharges in response to public notice comment, July 2020. This permit continues COD benchmarks in the stormwater at this site.

ANTIDEGRADATION REVIEW:

Process water discharges with new, altered, or expanding flows, the Department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

- ✓ Not applicable; the facility has not submitted information proposing increased process water flow discharge; no further degradation proposed therefore no further review necessary. The treatment plant installed is required to reduce pollutants and

combine discharges from the facility. From the antidegradation review, “According to a letter dated December, 2019, Dyno Nobel is taking action in response to a Consent Decree with the US EPA at the Carthage site. Multiple wastewater outfalls are being consolidated to a single discharge location. Effluent from the site will be unified by a below grade collection system that will convey flows to a proposed trickling filter and settling tank. High strength wastes as identified in the report are to be maintained separated and contained for the purpose of hauling to a regional facility capable of treating the high strength wastewater. Review of the proposal indicates no new process flows will be added to the existing wastewater effluent streams. High strength wastewaters will be contained onsite and hauled off site for treatment. Additional technology in the form of a trickling filter and settling tank will provide additional treatment to the existing facilities to further reduce the pollutant loading to the receiving waterbody and ensure compliance with permit effluent limits. The proposed upgrade will not require an antidegradation review according to Missouri Antidegradation Rule and Implementation Procedure.”

This permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) which must include an alternative analysis (AA) of the BMPs. The SWPPP must be developed, implemented, updated, and maintained at the facility. Failure to implement and maintain the chosen alternative, is a permit violation. The AA is a structured evaluation of BMPs to determine which are reasonable and cost effective. Analysis should include practices designed to be 1) non-degrading, 2) less degrading, or 3) degrading water quality. The chosen BMP will be the most reasonable and cost effective while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why “no discharge” or “no exposure” are not feasible alternatives at the facility. Existing facilities with established SWPPPs and BMPs need not conduct an additional alternatives analysis unless new BMPs are established to address BMP failures or benchmark exceedances. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.015(9)(A)5 and 7.031(3). For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the AA performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

BEST MANAGEMENT PRACTICES:

Minimum site-wide best management practices are established in this permit to ensure all permittees are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these best management practices are not specifically included for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of the state. If the minimum best management practices are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state, therefore pollutants cannot be released unless in accordance with RSMo 644.011 and 644.016 (17).

COST ANALYSIS FOR COMPLIANCE (CAFCOM):

Pursuant to Section 644.145, RSMo, when incorporating a new requirement for discharges from publicly owned facilities, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned facility, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits not including new requirements may be deemed affordable.

✓ The Department is not required to complete a cost analysis for compliance because the facility is not publically owned.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as “...any pollutant listed as toxic under section 307(a)(1) or, in the case of “sludge use or disposal practices,” any pollutant identified in regulations implementing section 405(d) of the CWA.” Section 307 of the Clean Water Act then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

✓ Not applicable; the permittee/facility is not currently under Water Protection Program enforcement action. Actions have been taken by the EPA against this facility, a Consent Decree was filed 2/27/2020, and entered by the court effective May 6, 2020; case number 19-5031-MDH. Certain conditions within this permit were taken directly from the CD, these conditions are further described in Part IV, EFFLUENT LIMITS DETERMINATIONS where appropriate.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:

Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.

- ✓ Applicable; this facility does not fall under the jurisdiction of the Health Department and discharges domestic wastewater subsurface; see Underground Injection Control (UIC) requirements below and in the permit. This facility discharges domestic wastewater subsurface with flows greater than 3,000 gallons per day as calculated in accordance with 19 CSR 20-3.060(1)(E) and tables 2A and 2B. The domestic wastewater system is jurisdiction of the Missouri Department of Natural Resources. This permit does not authorize any industrial wastewater for introduction into the sub-surface system. This permit contains special conditions for these wells and authorizes use of these wells. The facility submitted Class V well registration information to the department during the July 2020 public notice period.

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.

Additional information: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (WQ422 through WQ449).

- ✓ Applicable, sludge/biosolids/septage are removed by contract hauler.
- ✓ Standard conditions Part III is incorporated into this permit.

EFFLUENT LIMITATIONS:

Effluent limitations derived and established for this permit are based on current operations of the facility and applied per 10 CSR 20-7.015(9)(A). Any flow through the outfall is considered a discharge and must be sampled and reported as provided in the permit. Future permit action due to facility modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

EFFLUENT LIMITATION GUIDELINE:

Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

- ✓ The facility has an associated Effluent Limit Guideline (ELG) which is applicable to the wastewater discharges at this site and is applied under 40 CFR 125.3(a). The limits in the ELG are found at 40 CFR 457. Should Reasonable Potential be established for any particular parameter and water-quality derived effluent limits are more protective of the receiving water's quality, the WQS will be used as the limiting factor in accordance with 40 CFR 122.44(d) and 10 CSR 20-7.015(9)(A). See Part IV: EFFLUENT LIMITS DETERMINATION.

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

To assist the facility in entering data into the eDMR system, the permit describes limit sets in each table in Part A of the permit. The data entry personnel should use these identifiers to ensure data entry is being completed appropriately.

- ✓ The facility is currently using the eDMR data reporting system.

GENERAL CRITERIA CONSIDERATIONS:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). In instances where reasonable potential exists, the permit includes limitations within the permit to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, RSMo 644.076.1, as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission. See Part IV for specific determinations.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-2.010(82), and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- ✓ This facility is not monitoring the groundwater at the site to determine the extent of pollution caused by historical wastewater discharges to the surface of karst terrain. The permit writer, in consult with the Missouri Geological Survey, has determined this location to likely not be monitorable using a monitoring well network because of the porous nature of the soils and geologic formation in the area. The permit writer has observed locations where wastewater flow infiltrates the surface and does not apparently flow to the two receiving streams at the site.
- ✓ In a geohydrological investigation on September 7, 2017, MGS describes in LWE18010 and LWE18019 the following. Although no bedrock was exposed at the site, geologic maps and well drilling logs classify the geology at the site as highly permeable Mississippian-age Warsaw formation. This site receives a “severe” overall rating for geologic limitations at the site. The tributary to Center Creek exhibits losing characteristics. Sinkholes are mapped near the site. Fault lines are inactive currently, and are located about 5 miles southeast of the site. Based on the permeability of the bedrock, the overall permeability of the surficial material, regional groundwater and surface waters of Center Creek and its tributaries may be adversely impacted in the event of treatment failure.
- ✓ During the site visit in 2018, the permit writer noted various locations at the facility where groundwater was surfacing and where discharges of process water were likely entering groundwater.
- ✓ This is identified as outfall #018 in this permit to indicate to inspectors this discharge is not an illicit discharge nor a stormwater discharge.



LAND APPLICATION:

Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities to maintain a basin as no-discharge. Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from RSMo 644.026.

- ✓ Not applicable; this permit does not authorize operation of a surficial land application system to disperse wastewater or sludge.

LAND DISTURBANCE:

Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

- ✓ Not applicable; this permit does not provide coverage for land disturbance activities. The facility may obtain a separate land disturbance permit (MORA) online at <https://dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm>; MORA permits do not cover disturbance of contaminated soils, however, site specific permits such as this one can be modified to include appropriate controls for land disturbance of contaminated soils by adding site-specific BMP requirements and additional outfalls.

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <https://dnr.mo.gov/pubs/pub2337.htm>

- ✓ Applicable; this facility appears to fall under the definition of major water user and is registered with the Department.

OIL/WATER SEPARATORS:

Oil water separator (OWS) tank systems are frequently found at industrial sites where process water and stormwater may contain oils and greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require pretreatment prior to discharge to municipally owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separator tanks must be operated according to manufacturer's specifications and authorized in NPDES permits per 10 CSR 26-2.010(2) or may be regulated as a petroleum tank.

- ✓ Applicable; the OWS, as disclosed by the permittee, discharge to outfalls #020, and these outfalls contain appropriate parameters as determined by the permit writer. Sludge generated by OWS is subject to Special Conditions. See SLUDGE – INDUSTRIAL below.

PRETREATMENT:

This permit does not regulate pretreatment requirements for facilities discharging to an accepting permitted wastewater treatment facility. If applicable, the receiving entity (the publically owned treatment works - POTW) is to ensure compliance with any effluent limitation guidelines for pretreatment listed in 40 CFR Subchapter N per 10 CSR 20-6.100. Pretreatment regulations per RSMo 644.016 are limitations on the introduction of pollutants or water contaminants into publicly owned treatment works or facilities.

- ✓ Not applicable; this facility hauls wastewater to a POTW; the POTW is required to determine if the wastewater is acceptable.

RENEWAL REQUIREMENTS:

The renewal special condition permit requirement is designed to guide the facility to prepare and include all relevant and applicable information in accordance with 10 CSR 20-6.010(7)(A)-(C), and if applicable, federal regulations. The special condition may not include all requirements and requests for additional information may be made at the time of permit renewal under RSMo 644.051.13(5) and 40 CFR 122.21(h). Prior to submittal, the permittee must review the entire submittal to confirm that all required information and data is provided; it is the facility's responsibility to discern if additional information is required. Failure to fully disclose applicable information with the application or application addendums may result in a permit revocation per 10 CSR 20-6.010(8)(A) and may result in the forfeiture of permit shield protection authorized in RSMo 644.051.16.

REASONABLE POTENTIAL (RP):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A).

- ✓ Not applicable; a mathematical RPA was not conducted for the outfalls at this facility. This permit establishes permit limits for process water and limits and benchmarks for stormwater using best professional judgment and reasonable potential determinations (RPD) using the principles outlined in the Technical Support Document [EPA /505/2-90-001] section 3.1.2 and 3.2. Additional numeric information will be required to perform a statistical analysis in the future.
- ✓ For wastewaters, the RPD consisted of comparing application data (if available) to Missouri's Water Quality Standards and determining if the reported values have the potential to cause or contribute to exceedances of the standards, both numeric and narrative, found in 10 CSR 20-7.015 and 7.031.
- ✓ The Department has determined stormwater is not a continuous discharge and is therefore not necessarily dependent on mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and/or discharge monitoring data for the last five years and comparing those data to narrative or numeric water quality criteria.
- ✓ Permit writers use the Department's permit writer's manual (<http://dnr.mo.gov/env/wpp/permits/manual/permit-manual.htm>), the EPA's permit writer's manual (<https://www.epa.gov/npdes/npdes-permit-writers-manual>), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, stream flows and uses, and all applicable site specific information and data gathered by the permittee through discharge monitoring reports and renewal (or new) application sampling. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the permittee; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part V provides specific decisions related to this permit.
- ✓ The permit writer reviewed application materials, DMR data, past inspections, and other site specific factors to evaluate general and narrative water quality reasonable potential for this facility. Per the permit writer's best professional judgment, based on available data and full and accurate disclosure on application materials, this facility demonstrates reasonable potential for excursions from the general or narrative water quality criteria. See Part IV: Effluent Limit Determinations for specific parameter RP.

SAMPLING FREQUENCY JUSTIFICATION:

Outfall #020 is a new discharge therefore weekly or monthly sampling is required to determine if the facility will be in compliance with the operating permit, and in accordance with Appendix U of Missouri’s Water Pollution Control Permit Manual. The terms and conditions of this permit are independent of the EPA consent decree.

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOCs are allowed under 40 CFR 122.47 providing certain conditions are met. A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed in accordance with 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance in developing SOCs, and to attain a greater level of consistency, the department issued a policy on development of SOCs on October 25, 2012. The policy provides guidance to permit writers on standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

- ✓ Not applicable for outfall #020. The effluent limitations imposed in this permit for new outfall #020 are required to be met by the new treatment system in accordance with 10 CSR 20-7.031(3) immediately upon discharge.
- ✓ Applicable for steam outfalls except for #S02. In July 2020, the facility commented that pH limits on the direct discharge from steam condensate pipes are overly restrictive and not possible. The facility needs time to determine what steps are required to either 1) eliminate the outfalls, 2) demonstrate the steam does not enter waters of the state, 3) provide treatment for the pH prior to entry into waters of the state, or 4) demonstrate the discharge is de minimis. The facility provided the following timetable so an SOC of 5 years was able to be granted.

Five Year Workplan for Steam Condensate Compliance	
1 year from permit effective date (ED)	Complete inventory of steam condensate discharges for site and begin data collection to support a de minimis showing or to evaluate the need for alternative discharge management
2 years from ED	Continue data collection of steam condensate discharges
3 years from ED	Evaluate potential options for management of steam condensate discharges (and submit report to MDNR evaluating data and outlining whether additional management is warranted)
4 years from ED	Design system (if needed) to manage steam condensate discharges
5 years from ED	Construction of upgrades (if needed)

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING:

Per 260.505 RSMo, any emergency involving a hazardous substance must be reported to the Department’s 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <http://dnr.mo.gov/env/esp/spillbill.htm>

Any other spills, overflows, or unauthorized discharges reaching waters of the state must be reported to the regional office during normal business hours, or after normal business hours, to the Department’s 24 hour Environmental Emergency Response spill line at 573-634-2436.

SLUDGE – INDUSTRIAL:

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum

and solids filtered from water supplies and backwashed; and a material derived from industrial sludge. Industrial sludge could also be derived from lagoon dredging or other similar maintenance activities.

✓ Permittee is not authorized to land apply industrial sludge. Sludge is removed or sold. Hazardous wastes are managed via hazardous waste contractors.

STANDARD CONDITIONS:

The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act. Standard Conditions Part III, if attached to this permit, incorporate requirements dealing with domestic wastewater, sludge, and land application.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater-only discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), a benchmark, or a monitoring requirement as dictated by site specific conditions, the BMPs in place, the BMPs proposed, past performance of the facility, and the receiving water's current quality.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit writer may apply daily maximum limitations.

Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater because stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event without real-time ad-hoc monitoring. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, area of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. The permit writer also evaluates other similar permits for similar activities. A review of the guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) may also occur. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard may also be used. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States. If a facility has not disclosed BMPs applicable to the pollutants for the site, the permittee may not be eligible for benchmarks.

40 CFR 122.44(b)(1) requires the permit implement the most stringent limitations for each discharge, including industrially exposed stormwater; and 40 CFR 122.44(d)(1)(i) and (iii) requires the permit to include water-quality based effluent limitations where reasonable potential has been found. However, because of the non-continuous nature of stormwater discharges, staff are unable to perform statistical Reasonable Potential Analysis (RPA) under most stormwater discharge scenarios. Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections should occur after large rain events and any other time an issue is noted; sampling after a benchmark exceedance may need to occur to show the corrective action taken was meaningful.

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer, if there is no RP for water quality excursions.

✓ Applicable, this facility has stormwater outfalls where benchmarks or limitations were deemed appropriate contaminant measures.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The AA evaluation should include practices designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2)

financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification, which includes an appropriate fee; the application is found at: <https://dnr.mo.gov/forms/#WaterPollution>

- ✓ Applicable; a SWPPP shall be developed and implemented for this facility.
- ✓ The EPA Consent Decree indicated only 4 outfalls should be used for stormwater discharges. This permit identifies additional stormwater outfalls relevant to this MSOP reissuance. See STORMWATER section in Part I of the fact sheet.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the Department. Tables A1-B3 at 10 CSR 20-7.031 shows water quality standards.

UNDERGROUND INJECTION CONTROL (UIC):

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to section 1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the director finds the injection activity may endanger USDWs, the Department may require closure of the injection wells, or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the permittee shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: <http://dnr.mo.gov/forms/780-1774-f.pdf>

- ✓ Applicable. The facility has disclosed they have subsurface domestic wastewater systems. All Class V wells must be managed accordingly. See table of systems in permit.
- ✓ It is unknown if these systems were evaluated for efficacy at this site given they are so tightly clustered.
- ✓ The permit writer would like to note, the subsurface domestic systems are to be used only for domestic wastewater, of which washing out industrial painting supplies is not. Domestic wastewater is only hand washing, employee showering, toilet flushing, and employee breakroom kitchen sink or dishwasher wastewater, or other very similar activities. The permittee has disclosed the paint sink drain is no longer connected to the sub surface system.
- ✓ The facility has registered these wells with the state.
- ✓ During the public comment period in July 2020, the permit writer added special conditions relating to these UIC wells.

VARIANCE:

Per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

- ✓ Not applicable; this permit is not drafted under premise of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR WATER QUALITY LIMITS (WQL):

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water

quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A).

✓ Applicable; wasteload allocations were calculated where relevant using water quality criteria or water quality model results and by applying the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration
 Cs = upstream concentration
 Qs = upstream flow
 Ce = effluent concentration
 Qe = effluent flow

- Acute wasteload allocations designated as daily maximum limits (MDL) were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- Chronic wasteload allocations designated as monthly average limits (AML) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ).
- Water quality based MDL and AML effluent limitations were calculated using methods and procedures outlined in USEPA’s *Technical Support Document For Water Quality-based Toxics Control* or TSD EPA/505/2-90-001; 3/1991.
- Number of Samples “n”: In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For total ammonia as nitrogen, “n = 30” is used.

WASTELOAD ALLOCATION (WLA) MODELING:

Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

✓ Not applicable; a WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARD REVISION:

In accordance with section 644.058, RSMo, the Department is required to utilize an evaluation of the environmental and economic impacts of modifications to water quality standards of twenty-five percent or more when making individual site-specific permit decisions.

✓ Not applicable; the WQS revisions do not affect this permittee.

PART IV. EFFLUENT LIMITS DETERMINATIONS

OUTFALL #020 – EXPLOSIVES MANUFACTURING AND OTHER WASTEWATERS

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FLOW	MGD	0.3456	*	ONCE/WEEKDAY	MONTHLY	24 HR. TOT
TEMPERATURE	°F	*	*	ONCE/MONTH	MONTHLY	GRAB
TECHNOLOGY						
BOD ₅	mg/L	45	30	ONCE/WEEK	MONTHLY	GRAB
BOD ₅	lbs/day	6,480	2,160	ONCE/WEEK	MONTHLY	GRAB
COD	mg/L	*	*	ONCE/WEEK	MONTHLY	GRAB
COD	lbs/day	69,930	23,310	ONCE/WEEK	MONTHLY	GRAB
TSS	mg/L	45	30	ONCE/WEEK	MONTHLY	GRAB
TSS	lbs/day	2,250	756	ONCE/WEEK	MONTHLY	GRAB
CONVENTIONAL						
HALOGENS, TOTAL ‡	µg/L	*	*	ONCE/WEEK	MONTHLY	GRAB
OIL & GREASE	mg/L	*	*	ONCE/WEEK	MONTHLY	GRAB
pH †	SU	6.0 TO 9.0	6.0 TO 9.0	ONCE/WEEK	MONTHLY	GRAB
METALS						
ALUMINUM, TR	µg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
COPPER, TR	µg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
LEAD, TR	µg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
ZINC, TR	µg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
NUTRIENTS						
AMMONIA AS N	mg/L	22.0	8.4	ONCE/WEEK	MONTHLY	GRAB
AMMONIA AS N	lbs/day	*	*	ONCE/WEEK	MONTHLY	GRAB
KJELDAHL NITROGEN, TOTAL (TKN)	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
NITRATE PLUS NITRITE	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
PHOSPHORUS, TOTAL (TP)	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
OTHER						
CHLORIDE	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
SULFATE	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
CHLORIDE PLUS SULFATE	mg/L	*	*	ONCE/MONTH	MONTHLY	GRAB
ETHYLENE GLYCOL DINITRATE	µg/L	2,100	1,100	ONCE/WEEK	MONTHLY	GRAB
NITROGLYCERIN	mg/L	11.5	5.8	ONCE/WEEK	MONTHLY	GRAB
WET TEST - CHRONIC	TUc	5.9	-	ONCE/YEAR	ONCE/YEAR	GRAB

* Monitoring and reporting requirement only

† Report the minimum and maximum pH values; pH is not to be averaged

‡ See permit.

TR Total Recoverable

▼ The facility shall monitor for this parameter each weekday. A weekday is Monday, Tuesday, Wednesday, Thursday, and Friday. National holidays are exempted from this requirement.

◆ The facility shall monitor this parameter at least once per week. A week is from Monday through Sunday. Averaging of weekly measurements for the month shall be completed on only measurements completed in the month.

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD). Once per weekday monitoring continued; a weekday is Monday, Tuesday, Wednesday, Thursday, and Friday; national holidays are exempted. Effluent limitations are established on this outfall to assure compliance with the Phase III report and the assigned design flow.

Temperature

The facility has installed a treatment system which also conveys non-contact cooling wastewater. Monthly monitoring of the effluent is required to determine compliance with Missouri WQS per 10 CSR 20-7.031(5)(D).

TECHNOLOGY/ELG:

	Manufacturing ELG		Pounds	Pounds	Pounds	ELG Limits	
	457.12	457.12	Dynamite	Emulsion	per 1000#	Permit	Permit
	Daily	Monthly	Manufactured	Manufactured	ELG	Daily	Monthly
BOD5	0.72	0.24	9,000,000	n/a, no longer discharged	0.001	6,480	2160
COD	7.77	2.59	9,000,000	n/a, no longer discharged	0.001	69,930	23,310
TSS	0.25	0.084	9,000,000	n/a, no longer discharged	0.001	2,250	756

Biochemical Oxygen Demand - 5 Day (BOD₅)

45 mg/L daily maximum, 30 mg/L monthly average; technology-based concentration limits required per 10 CSR 20-7.015(8) limitations for all waters; as the source contains a significant amount of organic loading; ELG limits 6,480 lbs/day maximum, 2,160 lbs/day average. Previous permit limit 45 mg/L daily maximum and 22 mg/L monthly average at outfall #004. SOC not permissible for technology-based effluent limits. Weekly monitoring required during the initial permit term.

Chemical Oxygen Demand (COD)

ELG limits 69,930 lbs/day maximum, 23,310 lbs/day monthly average. DMR and application data range from 2.1 to 11,000 mg/L daily maximums and between 1.5 and 3720 mg/L monthly average for outfalls #003, #004, and #010. Weekly monitoring required during the initial permit term. The facility will report the concentration of the wastewater in addition to lbs/day.

Total Suspended Solids (TSS)

45 mg/L daily maximum, 30 mg/L monthly average; technology-based concentration limits required per 10 CSR 20-7.015(8) limitations for all waters; as the source contains a significant amount of organic loading. ELG limits 2,250 lbs/day maximum, 756 lbs/day monthly average. Weekly monitoring required during the initial permit term.

CONVENTIONAL:

Halogens, Total

In December of 2016, the laboratory remarked they treated the WET test sample for outfall #003 with sodium thiosulfate prior to commencing the WET test due to the presence of chlorine in the sample. The permittee marked believed absent on the application for chlorine. The permit writer believes the WET test report conclusively shows the presence of chlorine (which is a halogen, and other cross-reactive halogens) in the wastewater; monthly monitoring required. It is unknown which test method the laboratory used to determine the presence of chlorine, however, most analytical tests are not sophisticated enough to determine the difference between chlorine and other halogens, like fluorine, iodine, or bromine. Chlorine may have been present from the laundry wash wastewater. Halogens can be present from disinfection chemicals, cleaning agents, dispersal agents, or solvents. At this facility, halogens may be introduced into the wastewater from the manufacture and/or packaging of emulsion explosives. The permit writer has incomplete information on halogens in this facility’s wastewater. In other permits, however, the permit writer has applied a limit based on the water quality standards for total residual chlorine (19 µg/L acute exposure; 11 µg/L chronic exposure) to total halogens in the wastewater where, for example, bromine is used as a disinfectant. Although chlorine is lighter than bromine, and bromine is less environmentally active, bromine has a propensity to linger in the environment possibly bioaccumulating. It is the permit writers understanding then they have similar toxicities. Emulsion explosives contain a continuous organic liquid fuel phase, a discontinuous inorganic oxidizer (likely a halogen; group 17 elements) solution phase, and

an emulsifier. The facility has not disclosed the exact manufacturing process, nor are they required to, although disclosure in the future may be required to determine methods of removing halogens in the wastewater discharge. The permit writer believes monitoring for total halogens to be applicable to the discharge.

Oil & Grease

Monitoring required. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. This facility utilizes an oil water separator for the effluent. Weekly monitoring for this permit term until reasonable potential can be determined for the new wastewater treatment facility.

pH

6.0 to 9.0 SU. Technology based limits [10 CSR 20-7.015(9)(I)1.] are applicable to this outfall. The permit writer has determined there is no reasonable potential to affect water quality because the receiving stream provides buffering through mixing therefore technology limitations for wastewater are applied. The facility reported between 6.6 and 10.2 SU; both outfalls, #003 and #004 contained the same WQL in the past permit therefore no SOC afforded. New treatment systems must meet all requirements upon discharge per antidegradation requirements of 10 CSR 20-7.015(3). pH is a fundamental water quality indicator. Limitations for this parameter will protect the general criteria [10 CSR 20-7.031(4)] for toxicity, contact hazards, and full maintenance of beneficial uses such as fishable and swimmable. During the public notice comment period (July 2020), the facility commented water quality standards of 6.5 to 9.0 were not necessary; due to this comment, the WQS was removed and replaced with technology limits.

METALS:

Aluminum, Total Recoverable

Laundry discharge data provided was 530 µg/L, outfall #004 application data provided was 300 µg/L. However, the data does not consider mixing with all the wastewater now being discharged from outfall #020. As water quality is being assessed, the contribution of all flows must be considered. New parameter; monthly monitoring. The source of aluminum is unknown.

Copper, Total Recoverable

Laundry discharge data provided was 84 µg/L. However, the data does not consider mixing with all the wastewater now being discharged from outfall #020. As water quality is being assessed, the contribution of all flows must be considered. New parameter; monthly monitoring. The source of copper is unknown.

Lead, Total Recoverable

Laundry discharge data provided was 33 µg/L, outfall #004 application data provided was 12 µg/L. However, the data does not consider mixing with all the wastewater now being discharged from outfall #020. As water quality is being assessed, the contribution of all flows must be considered. New parameter; monthly monitoring.

Zinc, Total Recoverable

Laundry discharge data provided was 1,100 µg/L, outfall #004 application data provided was 53 and 120 µg/L. However, the data does not consider mixing with all the wastewater now being discharged from outfall #020. As water quality is being assessed, the contribution of all flows must be considered. New parameter; monthly monitoring. The permit writer has noted zinc is a TMDL pollutant; although this facility was not considered the source of the pollutants in the TMDL. Monitoring only has been applied for this permit cycle.

NUTRIENTS:

Ammonia, Total as Nitrogen

The facility's effluent has historically high ammonia levels; the new treatment system is designed to meet the WQS and effluent limits as calculated below. An SOC is not afforded due to antidegradation regulations at 10 CSR 20-7.031(3) and the implementation policy for construction of new facilities. Weekly ammonia monitoring is applicable for this permit term. The facility will also provide ammonia in lbs/day. New guidance directs permit writers to use the quarterly system of permit limits for the ecoregion.

The following default values were used for the Ozark Highland drainage unit:

	pH	Temp, °C
First Quarter	7.8	11
Second Quarter	7.8	21
Third Quarter	7.8	25.4
Fourth Quarter	7.8	14.6

However, because the effluent limits are driven by the acute standards in this instance (the zone of initial dilution cannot be greater than 10 times the design flow), then the limits remain the same for all seasons; temperature data is only used in the chronic calculation and does not affect the calculation at normal environmental levels in the range supplied above.

Acute ALP: $(0.411/(1+10^{7.204-7.8}))+58.4/(1+10^{(7.8-7.204)}) = 12.139 \text{ mg/L}$

Chronic ALP: $(0.0577/(1+10^{7.688-7.8}))+2.487/(1+10^{7.8-7.688})*\text{MIN}(2.85,(1.45*10^{0.028*(25-14.6)})) = 3.106 \text{ mg/L}$

Acute WLA: $C_e = ((0.535 \text{ cfsDF} + 0.435 \text{ cfsZID}) * 12.139 - (0.435 \text{ cfsZID} * 0.01 \text{ background})) / 0.535 \text{ cfsDF} = 22.001$

Chronic WLA: $C_e = ((0.535 \text{ cfsDF} + 6.025 \text{ cfsMZ}) * 3.106 - (6.025 \text{ cfsMZ} * 0.01 \text{ background})) / 0.535 \text{ cfsDF} = 37.971$

LTAa: $\text{WLAa} * \text{LTAa multiplier} = 22.001 * 0.321 = 7.064$

[CV: 0.6, 99th %ile]

LTAc: $\text{WLAc} * \text{LTAc multiplier} = 37.971 * 0.78 = 29.629$

[CV: 0.6, 99th %ile, 30 day average]

use most protective LTA: 7.064

Daily Maximum: $\text{MDL} = \text{LTA} * \text{MDL multiplier} = 7.064 * 3.114 = 22.0 \text{ mg/L}$

[CV: 0.6, 99th %ile]

Monthly Average: $\text{AML} = \text{LTA} * \text{AML multiplier} = 7.064 * 1.19 = 8.4 \text{ mg/L}$

[CV: 0.6, 95th %ile, n=30]

Kjeldahl Nitrogen, Total (TKN)

Nitrogen is expected to be present in this outfall's discharge therefore monthly monitoring is required per 10 CSR 20-7.015(9)(D)8.B.

Nitrate plus Nitrite

Nitrogen is expected to be present in this outfall's discharge therefore monthly monitoring is required per 10 CSR 20-7.015(9)(D)8.B.

Phosphorus, Total P (TP)

Phosphorus is expected to be present in this outfall's discharge therefore monthly monitoring is required per 10 CSR 20-7.015(9)(D)8.B.

OTHER:

Chloride, Sulfate, Chloride + Sulfate

Monitoring required. Historical data has chloride as a parameter of concern but it is unknown if the discharge of the combined wastewater at outfall #020 contains actionable levels of these parameters.

Ethylene Glycol Dinitrate (EGDN)

2100 µg/L daily maximum; 1100 µg/L monthly average from historic outfall #004. Previous permit was 2.1 mg/L (2100 µg/L) daily maximum and 1.1 mg/L (1100 µg/L) monthly average, and reporting in lbs/day. The facility reported between 1.1 to 1100 µg/L for this parameter. EGDN is a component of the dynamite packaging process, made by nitrating ethylene glycol; similar to nitroglycerin, although it is more volatile and less viscous, EGDN is added to nitroglycerin to lower the freezing point of the finished product. As toxicity is not established for this parameter in Missouri regulations, the permit writer is retaining these technology-based limitations to conform to antibacksliding regulations. Weekly monitoring continued.

Nitroglycerin

565 µg/L daily maximum; 171 µg/L monthly average continued from historic outfall #004. Previous permit limits were 0.6 mg/L daily maximum and 0.2 mg/L monthly average and reporting in lbs/day; limitations retained although units changed to µg/L. The facility reported between 13 and 2500 µg/L for this parameter. Weekly monitoring continued.

In accordance with the following guidance documents: EPA NPDES Permit Writer's Manual chapter 6, Missouri's Water Pollution Control Permits Manual chapter 5.2.1 and 5.2.2, the following toxic criteria should be used to develop a WET limit: acute toxicity = 0.3 TU_a; chronic toxicity = 1.0 TU_c. The acute toxicity considers the percent of effluent that is lethal to fifty percent of the exposed organisms. Therefore, the acute toxicity endpoint is the reciprocal of the TU_a. The chronic toxicity considers the percent of pollutant in the effluent that adversely affects twenty-five percent of the aquatic life, or inhibition concentration (IC₂₅). Therefore, the chronic toxicity endpoint is the reciprocal of the TU_c. For more information on these endpoints, please review Chapter 4, Section 5.5 of EPA's Technical Support Document for Water Quality-Based Toxic Controls (TSD). Based on the Material Safety Data Sheet (MSDS) revised by Pfizer in 2009, the LC₅₀ for nitroglycerin is 1.91 mg/L in aquatic life (ALP). From this value, we can complete the following calculations:

Variables and Formulas:

$$LC_{50} = 1.91 \text{ mg/L}$$

$$TU_a = 0.3$$

$$TU_a = \text{allowable concentration of pollutant X in effluent} / LC_{50}$$

$$0.3 = X / 1.91 \text{ mg/L}$$

$$X = 0.3 * 1.91 \text{ mg/L}$$

$$X = 0.573 \text{ mg/L}$$

The allowable concentration of pollutant in the effluent calculated above will be considered the acute wasteload allocation (WLAa) allowed for this parameter. With these established values, a mass-balance equation can be completed like any other water quality-based parameter. Due to the actual flow of the facility being greater than the design flow, actual flow was used to calculate final effluent limitations. Development of final effluent limitations must consider the highest reasonable potential for the facility to exceed water quality standards. This includes the largest discharge flow associated with the outfall. Additionally, the MSDS only contained an LC₅₀, which is associated with acute toxicity. Therefore, acute toxicity will drive the calculations below. It is assumed the background concentration of nitroglycerin in the receiving stream is 0 mg/L.

$$\text{Derived WQS: } LC_{50} = 1.91 \text{ mg/L} * 0.3 \text{ TU} = 0.573 \text{ mg/L}$$

$$\text{Chronic WLA: } C_e = ((0.535 \text{ cfsDF} + 6.025 \text{ cfsMZ}) * 0.573 - (6.025 \text{ cfsMZ} * 0 \text{ background})) / 0.535 \text{ cfsDF} = 7.029$$

$$\text{LTAc: } WLA_c * LTAc \text{ multiplier} = 7.029 * 0.527 = 3.707 \quad [\text{CV: 0.6, 99th \%ile}]$$

$$\text{Daily Maximum: MDL} = LTA * MDL \text{ multiplier} = 3.707 * 3.114 = 11.5 \text{ mg/L} \quad [\text{CV: 0.6, 99th \%ile}]$$

$$\text{Monthly Average: AML} = LTA * AML \text{ multiplier} = 3.707 * 1.552 = 5.8 \text{ mg/L} \quad [\text{CV: 0.6, 95th \%ile, n=4}]$$

Whole Effluent Toxicity (WET) Test, Chronic

A WET test is a quantifiable method to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water. Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:

- ✓ Facility is a designated a Major
- ✓ Facility handles large quantities of toxic substances, or substances toxic in large amounts
- ✓ Facility has Water Quality-Based Effluent Limitations for toxic substances
- ✓ Annual testing is the minimum testing frequency; monitoring requirements promulgated in 40 CFR 122.44(i)(2) state “requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once per year.”

The permit writer has determined this facility has reasonable potential to cause toxicity in the receiving stream until further data has been collected. Acute tests are not required when chronic tests are performed; the acute toxicity can be back-calculated based on chronic test data. Limitations of this parameter will protect for the general criteria of toxicity, chemical changes, and full maintenance of beneficial uses per 10 CSR 20-7.031(4).

$$\text{Acute ALP: } 0.3 \text{ TU}_a$$

$$\text{Chronic Assumption: } 1 \text{ TU}_c$$

$$\text{The AEC is } (0.535 \text{ CFSdf} / (0.51 \text{ CFSZid} + 0.535 \text{ CFSdf})) = 51.2\%$$

$$\text{The dilution series is } 100\%, 50\%, 25\%, 12.5\%, \text{ and } 6.25\%.$$

$$\text{Acute WLA: } C_e = ((0.535 \text{ cfsDF} + 0.51 \text{ cfsZID}) * 0.3 - (0.51 \text{ cfsZID} * 0 \text{ background})) / 0.535 \text{ cfsDF} * \text{ACR of } 10 = 5.86$$

$$\text{Chronic WLA: } C_e = ((0.535 \text{ cfsDF} + 5.1 \text{ cfsMZ}) * 1 - (5.1 \text{ cfsMZ} * 0 \text{ background})) / 0.535 \text{ cfsDF} = 10.533$$

$$\text{LTAA: } WLA_a * LTAA \text{ multiplier} = 5.86 * 0.321 = 1.881 \quad [\text{CV: 0.6, 99th \%ile}]$$

$$\text{LTAc: } WLA_c * LTAc \text{ multiplier} = 10.533 * 0.527 = 5.555 \quad [\text{CV: 0.6, 99th \%ile}]$$

$$\text{use most protective LTA: } 1.881$$

$$\text{Daily Maximum: MDL} = LTA * MDL \text{ multiplier} = 1.881 * 3.114 = 5.9 \text{ TU}_c \quad [\text{CV: 0.6, 99th \%ile}]$$

STEAM CONDENSATE OUTFALLS (#S##)

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE **
PHYSICAL						
FLOW	MGD	*	*	SEE BELOW	SEE BELOW	24 HR. TOT
TEMPERATURE	°F	*	*	SEE BELOW	SEE BELOW	GRAB
CONVENTIONAL						
COD	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB
CHLORINE, TOTAL RESIDUAL	µg/L	*	*	SEE BELOW	SEE BELOW	GRAB
pH † (INTERIM EFFLUENT LIMITS)	SU	*	*	SEE BELOW	SEE BELOW	GRAB
pH † (FINAL EFFLUENT LIMITS)	SU	6.0 TO 9.0	6.0 TO 9.0	SEE BELOW	SEE BELOW	GRAB
pH † (#S02)	SU	6.0 TO 9.0	6.0 TO 9.0	SEE BELOW	SEE BELOW	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB
NUTRIENTS						
AMMONIA AS N	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB
KJELDAHL NITROGEN, TOTAL (TKN)	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB
NITRATE PLUS NITRITE AS N	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB
OTHER						
CHLORIDE	mg/L	*	*	SEE BELOW	SEE BELOW	GRAB

* Monitoring and reporting requirement only

† Report the minimum and maximum pH values; pH is not to be averaged

** The facility must obtain a steam condensate sample directly from the discharge location without allowing the wastewater to come in contact with the ground or other wastewater or stormwater. Failure to obtain a pure sample may result in inaccurate sampling results.

Monitoring and reporting frequency as follows based on the maximum flow reported by the facility:

Monthly: #S12, #S15 (3 gpm or above), and #S21 as no other information was provided.

Quarterly: #S02, #S05, #S08, #S11, #S14, #S18, #S19, and #S20 (1-2 gpm)

Annually: #S10, #S13, and #S17 (less than 1 gpm)

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

Temperature

Monitoring required; these are steam condensate outfalls.

CONVENTIONAL:

Chemical Oxygen Demand (COD)

There is no numeric water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD may indicate materials/chemicals coming into contact with stormwater causing an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs.

Chlorine, Total Residual (TRC)

Monitoring required; TRC is a parameter of concern because potable water and bleach are used in the system.

pH

6.0 to 9.0 SU. Technology based limits [10 CSR 20-7.015(9)(I)1.] are applicable to these discharges. The permit writer has yet to make a determination if there is reasonable potential to affect water quality (for all steam outfalls except #S02) therefore technology limitations for wastewater are applied. Additionally, metals leachability and ammonia availability in wastewater is dependent on pH. Limitations in this permit will protect against aquatic organism toxicity, downstream water quality issues, human health hazard contact, and negative physical changes in accordance with the general criteria at 10 CSR 20-7.031(4) and the Clean Water Act's (CWA) goal of 100% fishable and swimmable rivers and streams.

In July 2020, it was noted by the facility, not all steam condensate discharges flow to receiving waterbodies. Further investigation is required by the facility to determine solutions for pH requirements. The facility indicated some steam condensate outfalls may be eliminated in the future, others may require treatment, and yet others, may not reach surface water. The permit writer notes, pH does not have groundwater standards, but surface application of wastewater cannot exceed hydraulic loading of the receiving soils. A schedule of compliance was added to the permit in response to the facility comments.

A schedule of compliance is not permissible for #S02 (Table A-8 in the permit), which was identified as outfall #013 (#2 Gel) in the previously issued permit; and having pH limits. This discharge was identified as also having water quality limits, but technology limits were deemed appropriate given new information; see Part III, ANTIBACKSLIDING for more information. The other steam discharges, listed as outfalls #012 (#1 Gel) and #014 (#3 Gel), were eliminated, therefore not included in this permit. Outfall #011 was misidentified as steam condensate, but is in fact non-contact cooling water. Outfall #011 was therefore not included in the steam outfalls as the non-contact cooling water has been routed to outfall #020.

Total Suspended Solids (TSS)

Discoloration was observed in some of the steam condensate outfalls. TSS monitoring is needed to determine compliance with general water quality criteria in 10 CSR 20-7.031(4).

NUTRIENTS:

Ammonia, Total as Nitrogen; Total Kjeldahl Nitrogen; and Nitrate plus Nitrite as N

Nutrients are parameters of concern at this site, the facility uses groundwater which has been shown to contain nitrogenous products. The permit writer based these constituents on requirements found in 10 CSR 20-7.015(9)(D)(8). The permit writer has determined the steam condensate must be classified for all suspected pollutants. New monitoring requirement.

OTHER:

Chloride

The permit writer is using best professional judgment to include chloride as a monitored parameter at the condensate outfalls. Chlorides can come from a variety of sources including softeners and treatment chemicals used in condensate lines. Salts can be condensed and are not included in other solids testing as they are in the dissolved phase. Chloride can cause toxicity in aquatic life at acute levels of 860 mg/L and at chronic exposure levels above 230 mg/L. Monitoring is required to determine compliance with Missouri's Water Quality Standards.

STORMWATER OUTFALLS: #004, #007, #008, #009, #011, #017, #021, & #022

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCHMARK	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL						
FLOW	MGD	*	-	ONCE/QUARTER	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL						
COD	mg/L	**	45	ONCE/QUARTER	QUARTERLY	GRAB
OIL & GREASE	mg/L	**	10	ONCE/QUARTER	QUARTERLY	GRAB
pH †	SU	**	6.0 TO 9.0	ONCE/QUARTER	QUARTERLY	GRAB
TSS	mg/L	**	50	ONCE/QUARTER	QUARTERLY	GRAB
NUTRIENTS						
AMMONIA, TOTAL AS N	mg/L	**	4.0	ONCE/QUARTER	QUARTERLY	GRAB
OTHER						
NITROGLYCERIN	µg/L	**	200	ONCE/QUARTER	QUARTERLY	GRAB

- * Monitoring and reporting requirement only
- ** Monitoring with associated benchmark
- † Report the minimum and maximum pH values; pH is not to be averaged
- TR Total Recoverable

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

CONVENTIONAL:

Chemical Oxygen Demand (COD)

Monitoring with 45 mg/L daily maximum benchmark is included using the permit writer’s best professional judgment; continued from the previous permit. There is no numeric water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD may indicate materials/chemicals coming into contact with stormwater causing an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs. The benchmark value falls within the range of values implemented in other permits having similar industrial activities and is achievable through proper BMP controls.

Oil & Grease

Monitoring with a daily maximum benchmark of 10 mg/L; believed present using permit writer best professional judgment as the facility did not submit application materials for the stormwater outfalls, and there are numerous vehicles on site. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as “oil and grease”. Per 10 CSR 20-7.031 Table A1: *Criteria for Designated Uses*; 10 mg/L is the standard for protection of aquatic life. This standard will also be used to protect the general criteria found at 10 CSR 20: 7.031(4). Ten mg/L is the level at which sheen is expected to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

pH

Monitoring with a benchmark of 6.0 to 9.0 – instantaneous grab sample; technology-based benchmarks will be implemented. The previous permit implemented limits of 6.5 to 9.0 SU. See part III, ANTIBACKSLIDING for more information. The limit was switched to a benchmark in response to public notice comments, July 2020.

Total Suspended Solids (TSS)

Monitoring with a daily maximum benchmark of 50 mg/L; continued from previous permit. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

NUTRIENTS:

Ammonia, Total as Nitrogen

Quarterly monitoring required; established per the permit writers best professional judgment as this parameter is a pollutant of concern at this site. The 2020 Consent Decree established the numeric benchmark at 4.0 mg/L. This value is achievable through good BMPs which seek to eliminate spills of prill or other sources of ammonia. It is important to determine the total stream loading of this parameter from the entire site through monitoring the stormwater outfalls.

OTHER:

Nitroglycerin

Nitroglycerin was established in the 2020 EPA consent decree (CD) with a benchmark of 200 µg/L. The permit writer is implementing this monitoring and benchmark requirement in the permit as well; although frequencies may vary as required in the CD. Monitoring for nitroglycerin will be a good measure of best management practices implemented at the site and will assure spills and leaks are cleaned up and controlled.

PART V. ADMINISTRATIVE REQUIREMENTS

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than two years old, such data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

✓ This permit is not being synchronized at this time due to the complexity of the permit.

PUBLIC NOTICE:

The Department shall give public notice a draft permit has been prepared and its issuance is pending. <http://dnr.mo.gov/env/wpp/permits/pn/index.html>. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

✓ The Public Notice period for this operating permit was from 6/26/2020 to 7/27/2020.

Major comments and responses during public notice are summarized here.

Comment: The design flow implemented in the draft permit was incorrect and based on the phase IV report; however, the permittee indicated the phase III report was correct.

Response: The design flow was changed from 3.684 to 0.3456. Limits on flow were included because of the discrepancy and to assure stream loading is not affected negatively. All limits in the permit were recalculated based on this comment. A lower design flow increases concentration-based permit limits; when the flow is reduced, the pollutant concentration can increase although the stream loading of pollutants remains the same.

Comment: Several parameters in the stormwater outfalls may not require monitoring or do not need to be measured monthly. Some outfalls identified as stormwater are not actually stormwater or are not industrially exposed.

Response: Certain parameters were removed; all stormwater monitoring is required quarterly (none will be required monthly). Some parameters were moved to only requiring sampling at permit renewal. See special conditions for renewal requirements. The map of the stormwater outfalls was revised.

Comment: The EPA provided additional information regarding repairs at the site and the facility indicated communications with EPA may not have been shared with the Department regarding air condensate discharges.

Response: A requirement to submit all communication with the EPA for the term of the permit was added to the renewal special conditions. A requirement to inform the Department of air conditioner (cooling) condensate was added.

Comment: Dyno needs a schedule for pH at the steam condensate outfalls. An email was submitted on 7/22/2020 with proposed work schedule for 5 years.

Response: A 5 year schedule was included in the permit for steam condensate.

DATE OF FACT SHEET: JULY 28, 2020

COMPLETED BY:

PAM HACKLER, ENVIRONMENTAL SCIENTIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 526-3386
pam.hackler@dnr.mo.gov



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
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MISSOURI CLEAN WATER COMMISSION
August 1, 2019**

PART III – BIOSOLIDS AND SLUDGE FROM DOMESTIC TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. PART III Standard Conditions pertain to biosolids and sludge requirements under the Missouri Clean Water Law and regulations for domestic and municipal wastewater and also incorporates federal sludge disposal requirements under 40 CFR Part 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR Part 503 for domestic biosolids and sludge.
2. PART III Standard Conditions apply only to biosolids and sludge generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Biosolids and Sludge Use and Disposal Practices:
 - a. The permittee is authorized to operate the biosolids and sludge generating, treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge/biosolids volume listed in the facility description and shall not use biosolids or sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. For facilities operating under general operating permits that incorporate Standard Conditions PART III, the facility is authorized to operate the biosolids and sludge generating, treatment, storage, use and disposal facilities identified in the original operating permit application, subsequent renewal applications or subsequent written approval by the department.
4. Biosolids or Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater biosolids or sludge from other facilities as long as the permittee's design sludge capacity is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the biosolids or sludge generator or hauler that certifies the type and source of the sludge
5. Nothing in this permit precludes the initiation of legal action under local laws, except to the extent local laws are preempted by state law.
6. This permit does not preclude the enforcement of other applicable environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable biosolids or sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.
8. In addition to Standard Conditions PART III, the Department may include biosolids and sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Exceptions to Standard Conditions PART III may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department may modify a site-specific permit following permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR § 124.10, and 40 CFR § 501.15(a)(2)(ix)(E).
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR Part 503.

SECTION B – DEFINITIONS

1. Best Management Practices are practices to prevent or reduce the pollution of waters of the state and include agronomic loading rates (nitrogen based), soil conservation practices, spill prevention and maintenance procedures and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food, feed or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR Part 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with 40 CFR Part 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Feed crops are crops produced primarily for consumption by animals.
8. Fiber crops are crops such as flax and cotton.
9. Food crops are crops consumed by humans which include, but is not limited to, fruits, vegetables and tobacco.
10. Industrial wastewater means any wastewater, also known as process wastewater, not defined as domestic wastewater. Per 40 CFR Part 122.2, process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Land application of industrial wastewater, residuals or sludge is not authorized by Standard Conditions PART III.
11. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological contact systems, and other similar facilities. It does not include wastewater treatment lagoons or constructed wetlands for wastewater treatment.
12. Plant Available Nitrogen (PAN) is nitrogen that will be available to plants during the growing seasons after biosolids application.
13. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
14. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs), sewage sludge incinerator ash, or grit/screenings generated during preliminary treatment of domestic sewage.
15. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen or concrete lined basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
16. Septage is the sludge pumped from residential septic tanks, cesspools, portable toilets, Type III marine sanitation devices, or similar treatment works such as sludge holding structures from residential wastewater treatment facilities with design populations of less than 150 people. Septage does not include grease removed from grease traps at a restaurant or material removed from septic tanks and other similar treatment works that have received industrial wastewater. The standard for biosolids from septage is different from other sludges. See Section H for more information.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Biosolids or sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and the requirements of Standard Conditions PART III or in accordance with Section A.3.c., above.
2. The permittee shall operate storage and treatment facilities, as defined by Section 644.016(23), RSMo, so that there is no biosolids or sludge discharged to waters of the state. Agricultural storm water discharges are exempt under the provisions of Section 644.059, RSMo.
3. Mechanical treatment plants shall have separate biosolids or sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove biosolids or sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – BIOSOLIDS OR SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR BY CONTRACT HAULER

1. Permittees that use contract haulers, under the authority of their operating permit, to dispose of biosolids or sludge, are responsible for compliance with all the terms of this permit. Contract haulers that assume the responsibility of the final disposal of biosolids or sludge, including biosolids land application, must obtain a Missouri State Operating Permit unless the hauler transports the biosolids or sludge to another permitted treatment facility.
2. Testing of biosolids or sludge, other than total solids content, is not required if biosolids or sludge are hauled to a permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Please be aware that sludge incineration facilities may be subject to the requirements of 40 CFR Part 503 Subpart E, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or, if the ash is determined to be hazardous, with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, mass of sludge incinerated and mass of ash generated. Permittee shall also provide the name of the ash disposal facility and permit number if applicable.

SECTION F – SURFACE DISPOSAL SITES AND BIOSOLIDS AND SLUDGE LAGOONS

1. Please be aware that surface disposal sites of biosolids or sludge from wastewater treatment facilities may be subject to other laws including the requirements in 40 CFR Part 503 Subpart C, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Biosolids or sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain biosolids or sludge storage lagoons as storage facilities, accumulated biosolids or sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of biosolids or sludge removed will be dependent on biosolids or sludge generation and accumulation in the facility. Enough biosolids or sludge must be removed to maintain adequate storage capacity in the facility.
 - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of biosolids or sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section I.

SECTION G – LAND APPLICATION OF BIOSOLIDS

1. The permittee shall not land apply biosolids unless land application is authorized in the facility description, the special conditions of the issued NPDES permit, or in accordance with Section A.3.c., above.
2. This permit only authorizes “Class A” or “Class B” biosolids derived from domestic wastewater to be land applied onto grass land, crop land, timber, or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
3. Class A Biosolids Requirements: Biosolids shall meet Class A requirements for application to public contact sites, residential lawns, home gardens or sold and/or given away in a bag or other container.
4. Class B biosolids that are land applied to agricultural and public contact sites shall comply with the following restrictions:
 - a. Food crops that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
 - b. Food crops below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.
 - c. Food crops below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.
 - d. Animal grazing shall not be allowed for 30 days after application of biosolids.
 - e. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
 - f. Turf shall not be harvested for one year after application of biosolids if used for lawns or high public contact sites in close proximity to populated areas such as city parks or golf courses.
 - g. After Class B biosolids have been land applied to public contact sites with high potential for public exposure, as defined in 40 CFR § 503.31, such as city parks or golf courses, access must be restricted for 12 months.
 - h. After Class B biosolids have been land applied public contact sites with low potential for public exposure as defined in 40 CFR § 503.31, such as a rural land application or reclamation sites, access must be restricted for 30 days.
5. Pollutant limits
 - a. Biosolids shall be monitored to determine the quality for regulated pollutants listed in Table 1, below. Limits for any pollutants not listed below may be established in the permit.
 - b. The number of samples taken is directly related to the amount of biosolids or sludge produced by the facility (See Section J, below). Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to achieve pollutant concentration below those identified in Table 1, below.
 - c. Table 1 gives the ceiling concentration for biosolids. Biosolids which exceed the concentrations in Table 1 may not be land applied.

TABLE 1

Biosolids ceiling concentration	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

- d. Table 2 below gives the low metal concentration for biosolids. Because of its higher quality, biosolids with pollutant concentrations below those listed in Table 2 can safely be applied to agricultural land, forest, public contact sites, lawns, home gardens or be given away without further analysis. Biosolids containing metals in concentrations above the low metals concentrations but below the ceiling concentration limits may be land applied but shall not exceed the annual loading rates in Table 3 and the cumulative loading rates in Table 4. The permittee is required to track pollutant loading onto application sites for parameters that have exceeded the low metal concentration limits.

TABLE 2

Biosolids Low Metal Concentration	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

- e. Annual pollutant loading rate.

Table 3

Biosolids Annual Loading Rate	
Pollutant	Kg/ha (lbs./ac) per year
Arsenic	2.0 (1.79)
Cadmium	1.9 (1.70)
Copper	75 (66.94)
Lead	15 (13.39)
Mercury	0.85 (0.76)
Nickel	21 (18.74)
Selenium	5.0 (4.46)
Zinc	140 (124.96)

- f. Cumulative pollutant loading rates.

Table 4

Biosolids Cumulative Pollutant Loading Rate	
Pollutant	Kg/ha (lbs./ac)
Arsenic	41 (37)
Cadmium	39 (35)
Copper	1500 (1339)
Lead	300 (268)
Mercury	17 (15)
Nickel	420 (375)
Selenium	100 (89)
Zinc	2800 (2499)

6. Best Management Practices. The permittee shall use the following best management practices during land application activities to prevent the discharge of biosolids to waters of the state.
- Biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under § 4 of the Endangered Species Act or its designated critical habitat.
 - Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
 - The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop

nitrogen removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kgTN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.

- i. PAN can be determined as follows:
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis.
 - ii. Crop nutrient production/removal to be based on crop specific nitrogen needs and realistic yield goals. **NOTE:** There are a number of reference documents on the Missouri Department of Natural Resources website that are informative to implement best management practices in the proper management of biosolids, including crop specific nitrogen needs, realistic yields on a county by county basis and other supporting references.
 - iii. Biosolids that are applied at agronomic rates shall not cause the annual pollutant loading rates identified in Table 3 to be exceeded.
- d. Buffer zones are as follows:
- i. 300 feet of a water supply well, sinkhole, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet of dwellings or public use areas;
 - iv. 100 feet (35 feet if biosolids application is down-gradient or the buffer zone is entirely vegetated) of lake, pond, wetlands or gaining streams (perennial or intermittent);
 - v. 50 feet of a property line. Buffer distances from property lines may be waived with written permission from neighboring property owner.
 - vi. For the application of dry, cake or liquid biosolids that are subsurface injected, buffer zones identified in 5.d.i. through 5.d.iii above, may be reduced to 100 feet. The buffer zone may be reduced to 35 feet if the buffer zone is permanently vegetated. Subsurface injection does not include methods or technology reflective of combination surface/shallow soil incorporation.
- e. Slope limitation for application sites are as follows:
- i. For slopes less than or equal to 6 percent, no rate limitation;
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels;
 - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
 - iv. Dry, cake or liquid biosolids that are subsurface injected, may be applied on slopes not to exceed 20 percent. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation.
- f. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- g. Biosolids may be land applied to sites with soil that are snow covered, frozen, or saturated with liquid when site restrictions or other controls are provided to prevent pollutants from being discharged to waters of the state during snowmelt or stormwater runoff. During inclement weather or unfavorable soil conditions use the following management practices:
- i. A maximum field slope of 6% and a minimum 300 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be utilized for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - ii. A maximum field slope of 2% and 100 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be used for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - iii. Other best management practices approved by the Department.

SECTION H – SEPTAGE

1. Haulers that land apply septage must obtain a state permit. An operating permit is not required for septage haulers who transport septage to another permitted treatment facility for disposal.
2. Do not apply more than 30,000 gallons of septage per acre per year or the volume otherwise stipulated in the operating permit.
3. Septic tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to mechanical treatment facilities.
4. Septage must comply with Class B biosolids regarding pathogen and vector attraction reduction requirements before it may be applied to crops, pastures or timberland. To meet required pathogen and vector reduction requirements, mix 50 pounds of hydrated lime for every 1,000 gallons of septage and maintain a septage pH of at least 12 pH standard units for 30 minutes or more prior to application.
5. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.
6. As residential septage contains relatively low levels of metals, the testing of metals in septage is not required.

SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all sludges and/or biosolids. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6.010 and 10 CSR 20 – 6.015.
3. Biosolids or sludge that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Biosolids and sludge shall meet the monitoring and land application limits for agricultural rates as referenced in Section G, above.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre. Alternative, site-specific application rates may be included in the closure plan for department consideration.
 - i. PAN can be determined as follows:
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis
4. Domestic wastewater treatment lagoons with a design treatment capacity less than or equal to 150 persons, are “similar treatment works” under the definition of septage. Therefore the sludge within the lagoons may be treated as septage during closure activities. See Section B, above. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required.
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Biosolids or sludge left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, and unless otherwise approved, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion. Alternative biosolids or sludge and soil mixing ratios may be included in the closure plan for department consideration.
6. Lagoon and earthen structure closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200.
7. When closing a mechanical wastewater plant, all biosolids or sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate

- surface water drainage without creating erosion.
 - b. Hazardous Waste shall not be land applied or disposed during mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations pursuant to 10 CSR 25.
 - c. After demolition of the mechanical plant, the site must only contain clean fill defined in Section 260.200.1(6) RSMo as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill, reclamation, or other beneficial use. Other solid wastes must be removed.
8. If biosolids or sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or I, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR Part 503, Subpart C.

SECTION J – MONITORING FREQUENCY

1. At a minimum, biosolids or sludge shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Biosolids or Sludge produced and disposed (Dry Tons per Year)	Monitoring Frequency (See Notes 1, and 2)		
	Metals, Pathogens and Vectors, Total Phosphorus, Total Potassium	Nitrogen TKN, Nitrogen PAN ¹	Priority Pollutants ²
319 or less	1/year	1 per month	1/year
320 to 1650	4/year	1 per month	1/year
1651 to 16,500	6/year	1 per month	1/year
16,501+	12/year	1 per month	1/year

¹Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

² Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) are required only for permit holders that must have a pre-treatment program. Monitoring requirements may be modified and incorporated into the operating permit by the Department on a case-by-case basis.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

- 2. Permittees that operate wastewater treatment lagoons, peak flow equalization basins, combined sewer overflow basins or biosolids or sludge lagoons that are cleaned out once a year or less, may choose to sample only when the biosolids or sludge is removed or the lagoon is closed. Test one composite sample for each 319 dry tons of biosolids or sludge removed from the lagoon during the reporting year or during lagoon closure. Composite sample must represent various areas at one-foot depth.
- 3. Additional testing may be required in the special conditions or other sections of the permit.
- 4. Biosolids and sludge monitoring shall be conducted in accordance with federal regulation 40 CFR § 503.8, Sampling and analysis.

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

- 1. The permittee shall maintain records on file at the facility for at least five years for the items listed in Standard Conditions PART III and any additional items in the Special Conditions section of this permit. This shall include dates when the biosolids or sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
- 2. Reporting period
 - a. By February 19th of each year, applicable facilities shall submit an annual report for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and biosolids or sludge disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when biosolids or sludge are removed from the lagoon during the report period or when the lagoon is closed.
- 3. Report Form. The annual report shall be prepared on report forms provided by the Department or equivalent forms approved by the Department.
- 4. Reports shall be submitted as follows:
Major facilities, which are those serving 10,000 persons or more or with a design flow equal to or greater than 1 million gallons per day or that are required to have an approved pretreatment program, shall report to both the Department and EPA if the facility land applied, disposed of biosolids by surface disposal, or operated a sewage sludge incinerator. All other facilities shall maintain their biosolids or sludge records and keep them available to Department personnel upon request. State reports shall be submitted to the address listed as follows:

DNR regional or other applicable office listed in the permit (see cover letter of permit)

ATTN: Sludge Coordinator

Reports to EPA must be electronically submitted online via the Central Data Exchange at: <https://cdx.epa.gov/> Additional information is available at: <https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws>

5. Annual report contents. The annual report shall include the following:
 - a. Biosolids and sludge testing performed. If testing was conducted at a greater frequency than what is required by the permit, all test results must be included in the report.
 - b. Biosolids or sludge quantity shall be reported as dry tons for the quantity produced and/or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name and address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities:

If using a contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate biosolids or sludge use permit.
 - g. Land Application Sites:
 - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
 - iii. Report the method used for compliance with pathogen and vector attraction requirements.
 - iv. Report soil test results for pH and phosphorus. If no soil was tested during the year, report the last date when tested and the results.

28274

RECEIVED

OCT 06 2017



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL PROGRAM
FORM A - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY

CHECK NUMBER

DATE RECEIVED

FEE SUBMITTED

10/6/17

J.S ✓

Note y PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
- An operating permit and antidegradation review public notice
 - A construction permit following an appropriate operating permit and antidegradation review public notice
 - A construction permit and concurrent operating permit and antidegradation review public notice
 - A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
 - An operating permit for a new or unpermitted facility Construction Permit # _____
 - An operating permit renewal: permit # MO- 0002402 Expiration Date 3/31/2018
 - An operating permit modification: permit # MO- _____ Reason: _____

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) YES NO

2. FACILITY

NAME Dyno Nobel Inc. (Carthage Plant)		TELEPHONE WITH AREA CODE 417-358-4061	
		FAX 417-358-1383	
ADDRESS (PHYSICAL) 17562 Gum Road	CITY Carthage	STATE MO	ZIP CODE 64836

3. OWNER

NAME Dyno Nobel Inc.		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE 801-364-4800	
			FAX 801-3216706	
ADDRESS (MAILING) 2795 East Cottonwood Parkway, Suite 500	CITY Salt Lake City	STATE UT	ZIP CODE 84121	

3.1 Request review of draft permit prior to public notice? YES NO

4. CONTINUING AUTHORITY

NAME Dyno Nobel Inc. (Carthage Plant)		TELEPHONE WITH AREA CODE 4173584061	
		FAX 4173581383	
ADDRESS (MAILING) 17562 Gum Road	CITY Carthage	STATE MO	ZIP CODE 64836

5. OPERATOR

NAME Dyno Nobel Inc.		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE (417) 358-4061	
			FAX (417) 358-1383	
ADDRESS (MAILING) 17562 Gum Road	CITY Carthage	STATE MO	ZIP CODE 64836	

6. FACILITY CONTACT

NAME Jacob Cauble		TITLE Environmental Manager	TELEPHONE WITH AREA CODE 4173592253	
			FAX 4173592215	

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

See attached Table 1.1.

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

All Outfalls: SIC 2892 NAICS 325920

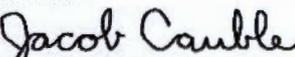
8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION
(Complete all forms that are applicable.)

- A. Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? YES NO
 If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).
- B. Is your facility considered a "Primary Industry" under EPA guidelines: YES NO
 If yes, complete Forms C and D.
- C. Is application for storm water discharges only? YES NO
 If yes, complete EPA Form 2F.
- D. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale. **See Figure 1.1**
- E. Is wastewater land applied? If yes, complete Form I. YES NO
- F. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? YES NO
 If yes, complete Form R.

9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
 (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

See Attached Figure 1.3 and Table 1.2.

10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Jacob Cauble ,Regional Environmental Manager West	TELEPHONE WITH AREA CODE (417) 359-2253
SIGNATURE 	DATE SIGNED Sep. 29, 2017

MO 780-1479 (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?

A map of the facility property boundaries is also included as Figure 2.

**INSTRUCTIONS FOR COMPLETING FORM A
APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT**

1. Check which option is applicable. **Do not check more than one item.** Construction and operating permit refer to permits issued by the Department of Natural Resources' Water Protection Program, Water Pollution Control Branch. Effective Sept. 1, 2008, a facility will be required to use *MISSOURI'S ANTIDegradation Rule and Implementation Procedure*. For more information, this document can be reviewed at www.dnr.mo.gov/env/wpp/docs/aip-cwc-appr-050708.pdf. This procedure will be applicable to new and expanded wastewater facilities and requires the proposed discharge to a water body to undergo a level of Antidegradation Review, which documents that the use of a water body's available assimilative capacity is justified.
- 1.1 An operating permit and antidegradation review public notice requires a Water Quality/Antidegradation Review Sheet to be submitted with the application (No fee required).

CONSTRUCTION PERMIT FEES

 - A. \$750 for a sewage treatment facility with a design flow of less than 500,000 gallons per day.
 - B. \$2,200 for a sewage treatment facility with a design flow of 500,000 gallons per day or more.

Different application and construction fees are applicable if only sewer and/or lift stations are to be constructed.

OPERATING PERMIT FEES

If the application is for a site-specific permit re-issuance, send no fees. You will be invoiced separately by the department.

Discharges covered by section 644.052.4 RSMo. (Primary or Categorical Facilities)

 - \$3,500 for a design flow under 1 mgd
 - \$5,000 for a design flow of 1 mgd or more
 - A. Discharges covered by section 644.052.5 RSMo. (Secondary or Non-Categorical Facilities).
 - \$1,500 for a design flow under 1 million gallons per day (mpg)
 - \$2,500 for a design flow of 1 mgd or more

SITE-SPECIFIC STORM WATER DISCHARGE FEES

 - A. \$1,350 for a design flow under 1 mgd.
 - B. \$2,350 for a design flow of 1 mgd or more.

OPERATING PERMIT MODIFICATIONS, including transfers, are subject to the following fees:

 - A. Municipals - \$200 each.
 - B. All others - 25 percent of annual fee.

Note: Facility name and address changes where owner, operator and continuing authority remain the same are not considered transfers.

Incomplete permit applications and/or related engineering documents will be returned by the department if they are not completed in the time frame established in a comment letter from the department to the owner. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.
2. Facility - Provide the name by which this facility is known locally. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Also include the street address or location of the facility. If the facility lacks a street name or route number, give the names of the closest intersection, highway, county road, etc.
3. Owner - Provide the legal name and address of owner.
- 3.1 Prior to submitting a permit to public notice, the department shall provide the permit applicant 10 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice. Check YES to review the draft permit prior to public notice. Check NO to waive the process and expedite the permit.
4. Continuing Authority - Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf or contact the appropriate Department of Natural Resources Regional Office.
5. Operator - Provide the name, certificate number and telephone number of the person operating the facility.
6. Provide the name, title and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department, if necessary.
- 7.1 An outfall is the point at which wastewater is discharged. Outfalls should be given in terms of the legal description of the facility. Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, please use a mapping system to approximate the coordinates; the department's mapping system is available at www.dnr.mo.gov/internetmapviewer/.
- 7.2 List only your primary Standard Industrial Classification, or SIC, and North American Industry Classification System code for each outfall. The SIC system was devised by the U.S. Office of Management and Budget to cover all economic activities. To find the correct SIC code, an applicant may check his or her unemployment insurance forms or contact the Missouri Division of Employment Security, 573-751-3215. The primary SIC code is that of the operation that generates the most revenue. If this information is not available, the number of employees or, secondly, production rate may be used to determine your SIC code. Additional information is on the Web for Standard Industrial Codes at www.osha.gov/pls/imis/sicsearch.html and for the North American Industry Classification System at www.census.gov/naics or contact the appropriate Department of Natural Resources Regional Office.
- 7.3

**INSTRUCTIONS FOR COMPLETING FORM A
APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
(CONTINUED)**

8. If you answer yes to A, B, C, D, E or F, then you must complete and file the supplementary form(s) indicated. A U.S. Geological Survey 1" = 2,000' scale map must be submitted with the permit application showing all outfalls, the receiving stream and the location of the downstream property owners. This type of map is available on the Web at www.dnr.mo.gov/internetmapviewer/ or from the Missouri Department of Natural Resources' Division of Geology and Land Survey in Rolla at 573-368-2125.
9. Please provide the name and address of the first downstream landowner, different from that of the permitted facility, through whose property the discharge will flow. Also, please indicate the location on the map. For discharges that leave the permitted facility and flow under a road or highway, or along the right-of-way, the downstream property owner is the landowner that the discharge flows to after leaving the right-of-way. For no discharge facilities, provide this information for the location where discharge would flow if there was one. For land application sites, include the owners of the land application sites and all adjacent landowners.
10. Signature - All applications must be signed as follows and the signature must be **original**:
 - A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
 - B. For a partnership or sole proprietorship, by a general partner or the proprietor.
 - C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

This completed form, along with the applicable permit fees, should be submitted to the appropriate Regional Office. Submittal of an incomplete application may result in the application being returned. A map of the department's regional offices with addresses and phone numbers can be viewed on the Web at www.dnr.mo.gov/regions/ro-map.pdf. If there are any questions concerning this form, contact the appropriate Regional Office or the Department of Natural Resources' Water Protection Program, Water Pollution Control Branch, Permits and Engineering Section at 573-751-6825.

Dyno Nobel, Inc.
Carthage Plant
NPDES Permit Renewal Form A
7.1 Legal Description of Outfalls
Table 1.1

001B	NW 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377471	NORTHING: 4112618		ZONE: 15
001F	SE 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377652	NORTHING: 4112336		ZONE: 15
004	SE 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377652	NORTHING: 4112337		ZONE: 15
007	SE 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377652	NORTHING: 4112336		ZONE: 15
008	NW 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377419	NORTHING: 4112721		ZONE: 15
009	NW 1/4	NW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377471	NORTHING: 4112618		ZONE: 15
011	SW 1/4	SE 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 378105	NORTHING: 4112829		ZONE: 15
017	NE 1/4	SW 1/4	SEC. 13	T: 28N	R:32W	JASPER COUNTY
	UTM COORDINATES		EASTING: 377891	NORTHING: 4111983		ZONE: 15

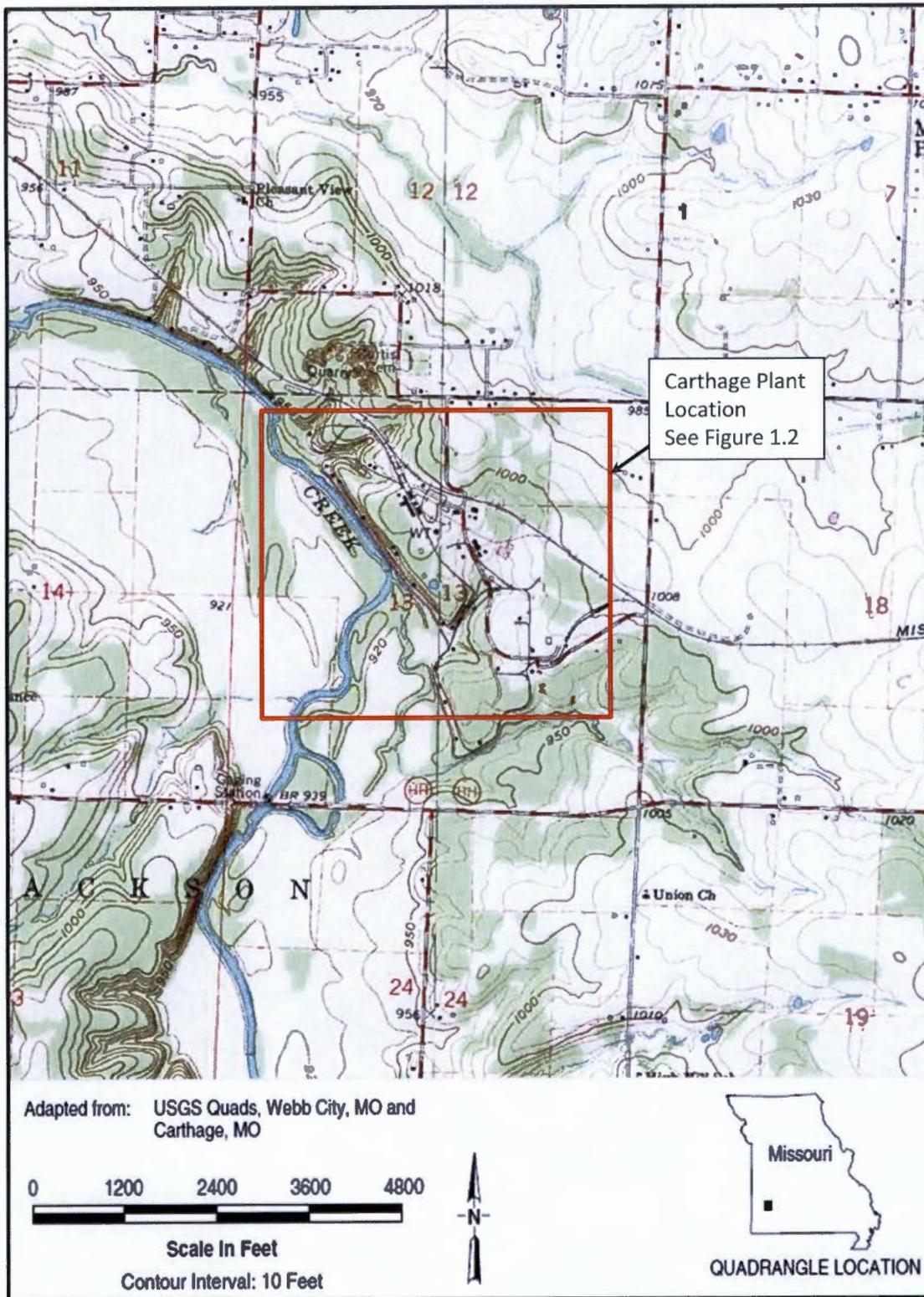


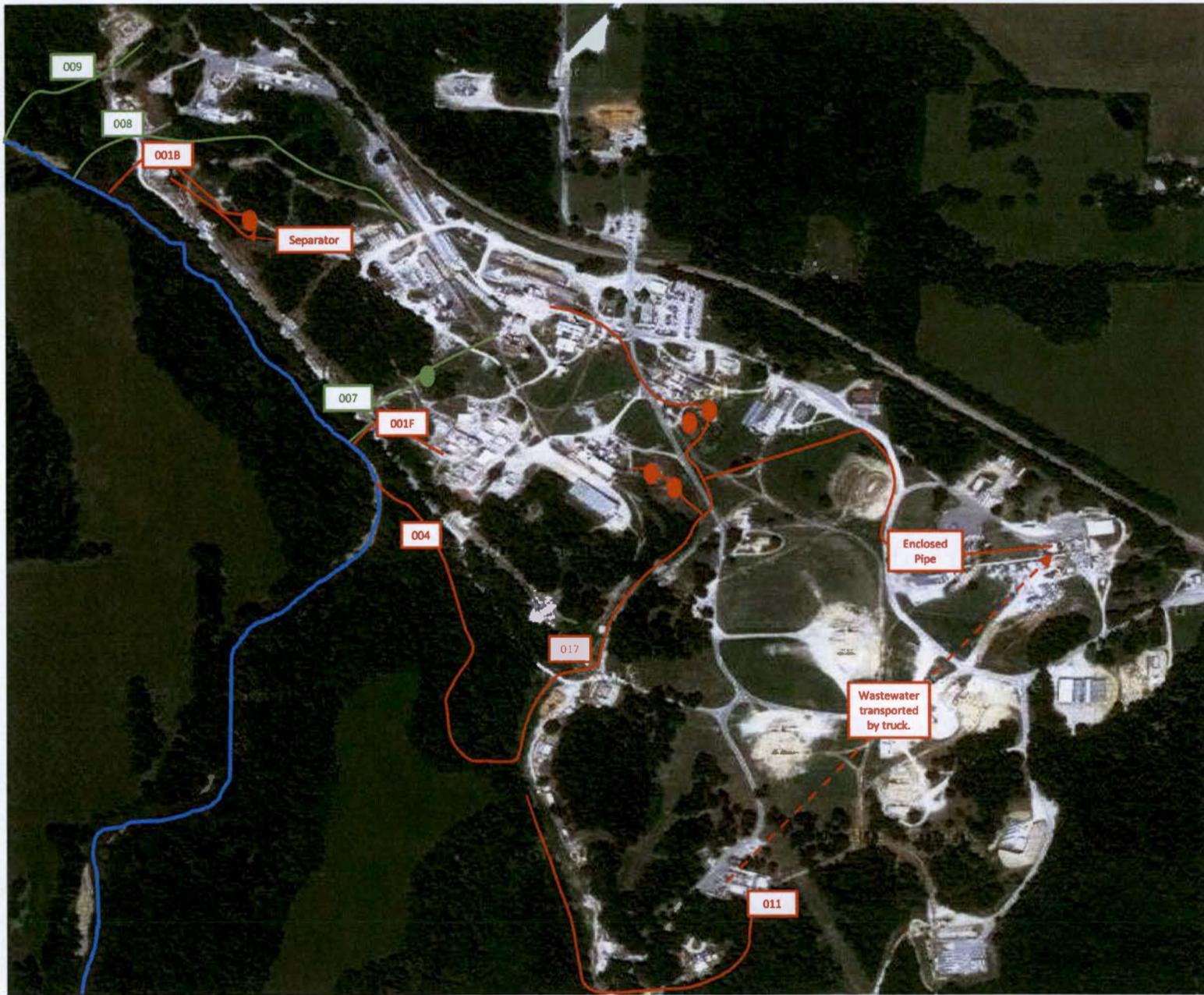
Figure 1.1
 Dyno Nobel Inc.
 Carthage, Missouri
 Permit No. MO-0002402
 Form A Section 8.00

Dyno Nobel Inc.
Carthage Plant
NPDES Permit Renewal Form A
9.00 Downstream Landowner(s)
Table 1.2

Parcel #	Property Owner					
	Last Name	First Name	Address	City	State	Zip Code
93-15-1-11-6	Quinn	Louis F. Jr. & Carol A.	7448 Count Lane 185	Carthage	MO	64836
93-15-1-11-6.01	Heikes	James & Elayne K.	7295 Count Lane 183	Carthage	MO	64836
93-15-1-11-8	Boggs			Carthage	MO	64836
93-15-1-11-9	Petty	John C. & Ruby E.	18672 Hackberry Lane	Carthage	MO	64836
93-15-1-11-10	Spencer	Barbar J.	7497 County Road 185	Carthage	MO	64836
93-15-1-11-10.01	Athey	William D. & Sonja R.	19367 Gum Road	Carthage	MO	64836
93-15-1-11-13	Dyno Nobel, Inc.		17562 Gum Road	Carthage	MO	64836
93-15-1-11-14	Athey	William D. & Sonja R.	19367 Gum Road	Carthage	MO	64836
933-15-1-11-15	Dyno Nobel, Inc.		17562 Gum Road	Carthage	MO	64836
93-15-1-11-16	Heikes	James & Elayne K.	7295 Count Lane 183	Carthage	MO	64836
93-15-1-11-17	McCall	Carl W. & Felicia V.	18188 Harvest Lane	Carthage	MO	64836
93-15-1-11-18	Blackford	Robert & Mary	18138 Harvest Lane	Carthage	MO	64836
93-15-1-11-19	Blackford	Robert & Mary	18138 Harvest Lane	Carthage	MO	64836

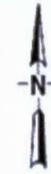
Note:

See attached Figure 1.3 for location of parcels.



Legend

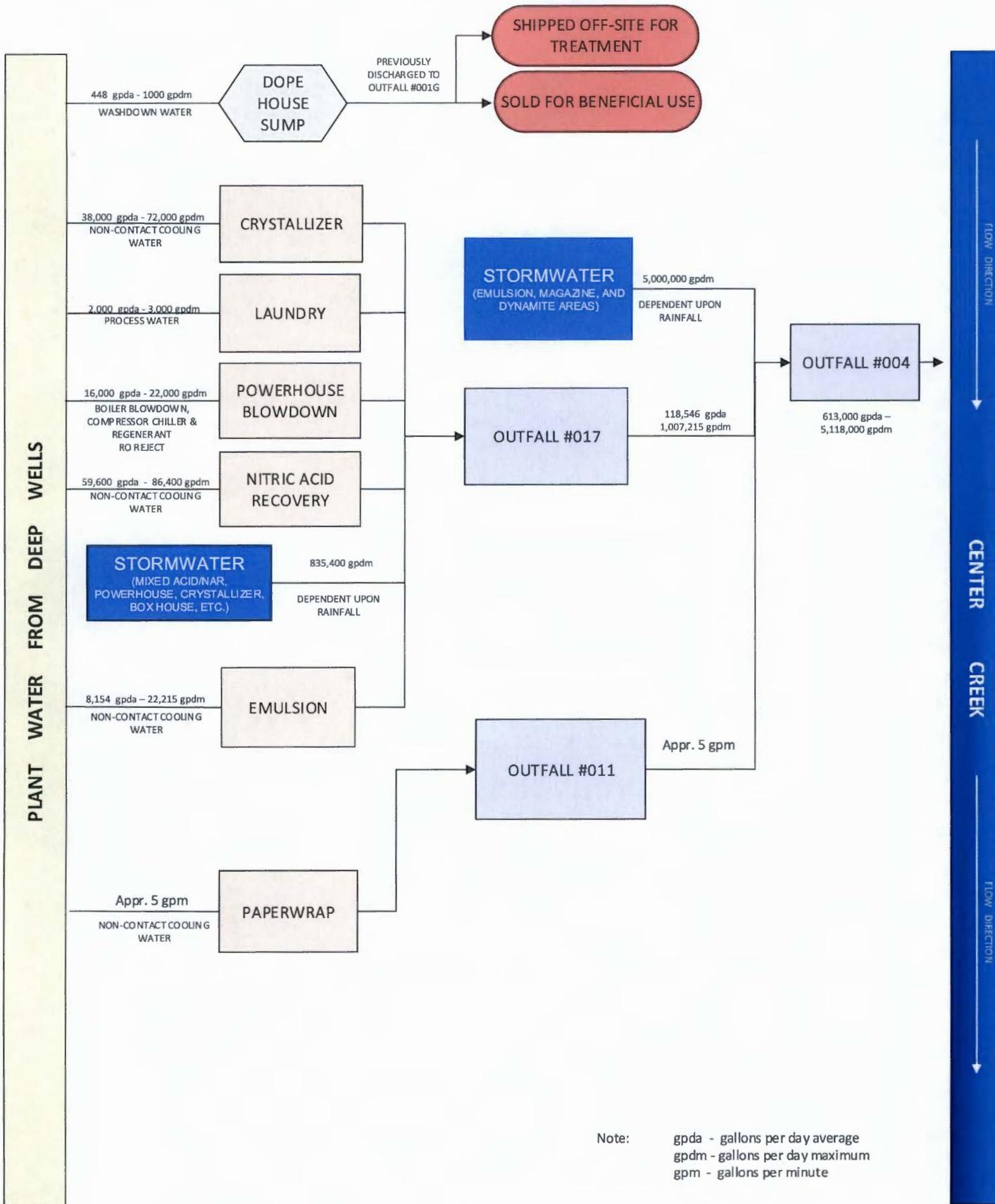
- Center Creek
- Outfall Path
- Stormwater Path
- Pond



Scale in Feet

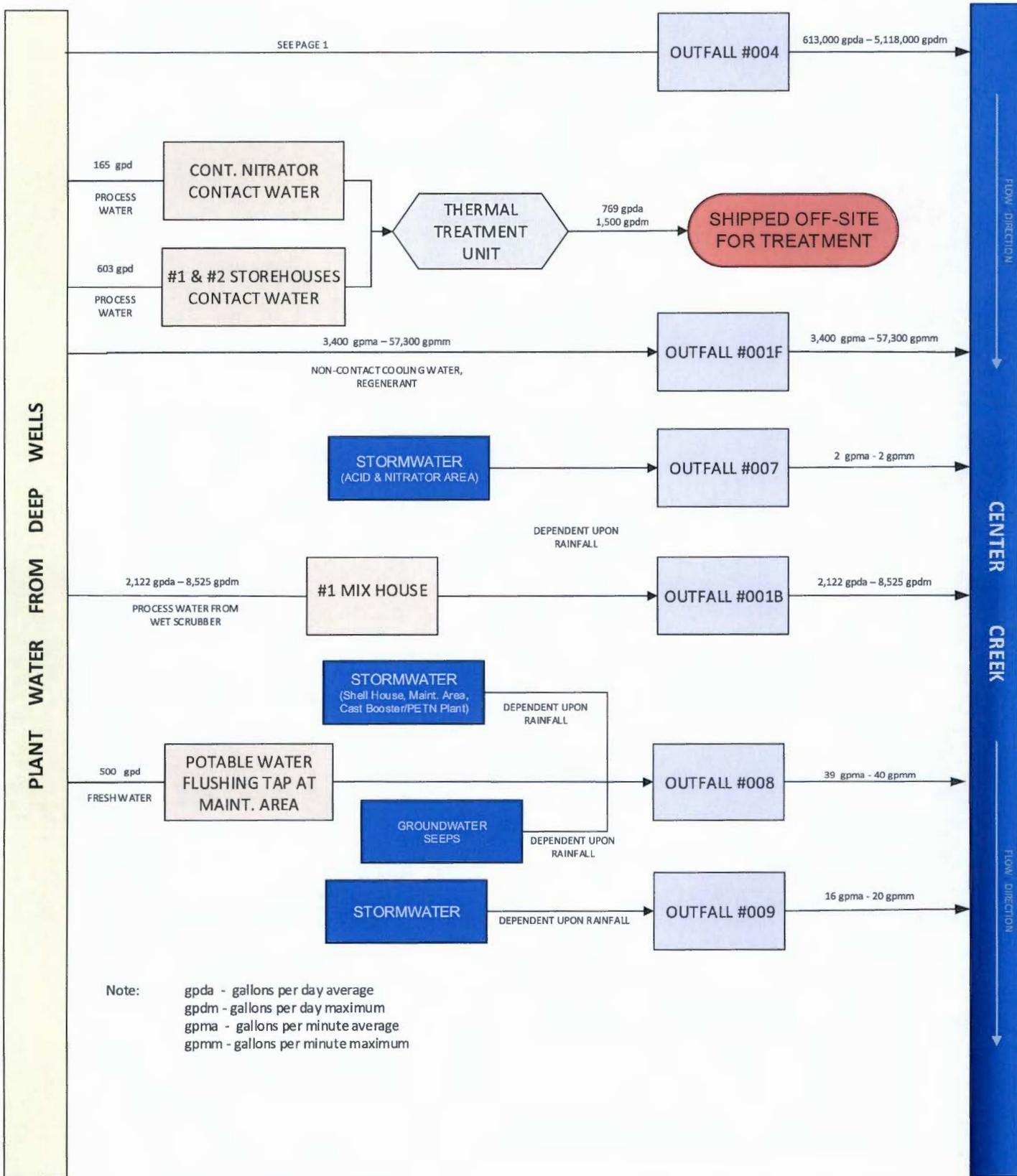
Figure 1.2
 Dyno Nobel Inc.
 Carthage, Missouri
 Permit No. MO-0002402
 Form A Section 8.00

**DYNO NOBEL, INC.
CARTHAGE MISSOURI
CURRENT PLANT WATER FLOW DIAGRAM 2017**



Note: gpd - gallons per day average
gpdm - gallons per day maximum
gpm - gallons per minute

**DYNO NOBEL, INC.
CARTHAGE MISSOURI
CURRENT PLANT WATER FLOW DIAGRAM 2017**





MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
FORM C – APPLICATION FOR DISCHARGE PERMIT –
MANUFACTURING, COMMERCIAL, MINING,
SILVICULTURE OPERATIONS, PROCESS & STORM WATER

FOR AGENCY USE ONLY

CHECK NO.

DATE RECEIVED

FEE SUBMITTED

TE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

Dyno Nobel, Inc. (Carthage Plant)

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO- 0002402

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 2892 (Explosive Manufacturing) B. SECOND _____
 C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

See Table 1.1 from Form A
 (Section 7.1 Legal Description of Outfalls)

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)

#001 to Outfall #004 and Center Creek (Grand Neosho River Basin)
 #004 to Center Creek (Grand Neosho River Basin)
 #017 to Outfall #004

RECEIVING WATER

#007 to Center Creek (Grand Neosho River Basin)
 #008 to Center Creek (Grand Neosho River Basin)
 #009 to Center Creek (Grand Neosho River Basin)
 #011 to Outfall #004

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

Dyno Nobel operates a commercial explosive manufacturing facility in Carthage, Missouri. The facility has historically manufactured nitrate esters (NE) and NE based dynamites since the early 1900s. The Carthage facility began to manufacture packaged emulsion explosives and cast booster explosives on a production scale in 1990 and 1995, respectively. In addition to explosives, other related products that are manufactured at the facility include mixed acids, denitrated sulfuric acid, and ammonium nitrate. The facility is also a distribution point for blasting agents, caps, and initiators.

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, public sewers 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.
 3. The treatment received by the wastewater.

Continue on additional sheets if necessary.

1. OUTFALL NO. (LIST)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	A. OPERATION (LIST)	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. DESCRIPTION	B. LIST CODES FROM TABLE A
Outfall #001	Dynamite Manufacturing	5520 gpd (65850 gpd)		
#001B	Wet Scrubber	2,122 gpd (8,525 gpd)	Settling Tank/Pond	1-T, 1-U
#001F	Continuous Nitrator – Non-contact cooling water/water softener	3,398 gpd (57,325 gpd)		
Outfall #004		612,965 gpd (5,117,980 gpd)		
Outfall #011	Non-contact cooling water	1 gpm (5 gpm)		
Outfall #017	See Below	118,546 gpd (1,007,292 gpd)		
Stormwater		Approx. (5 MGD)		
Outfall #007	Stormwater	2 gpm (2 gpm)		
Outfall #008	Stormwater	39 gpm (40 gpm)		
Outfall #009	Stormwater	16 gpm (20 gpm)		

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

YES (COMPLETE THE FOLLOWING TABLE) **NO (GO TO SECTION 2.50)**

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	
001B	Wet Scrubber	0	0	0	0			
001F	Non-contact Cooling Water	5	12	0.0034	0.057			5/week

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.) **NO (GO TO SECTION 2.60)**

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE c.) **NO (GO TO SECTION 2.60)**

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	
250,000	Pounds	Dynamite Manufacture	Outfalls 001, 004, 008, 009, 017
834,000	Pounds	Emulsion Manufacture	
(The dynamite and emulsion manufacturing processes have mass limits)			
60,000	Pounds	Cast Explosives	Outfall 008
28,000	Pounds	PETN Manufacture	Outfall 008

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT 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 3.00)**

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS THAT MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR ARE YOU PLANNING. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

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

3.10 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 RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.) NO (GO TO 3.20)

Whole Effluent Toxicity (WET) Tests (Acute and Chronic)

Permit Requirement

3.20 CONTRACT ANALYSIS INFORMATION

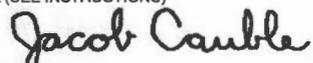
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.) NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services, Inc.	9608 Loiret Blvd. Lenexa, KS 66219	(913)563-1404	WET Tests

3.30 CERTIFICATION

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 individuals immediately responsible for obtaining the information, I believe the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Jacob Cauble, Regional Environmental Manager	TELEPHONE NUMBER WITH AREA CODE (417) 359-2231
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED Sep. 29, 2017

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.

(Use the same format)

SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
Outfall 003

INTAKE AND EFFLUENT CHARACTERISTICS

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	10.5	9.79					1	Mg/L	Lbs/day			
B. Chemical Oxygen Demand (COD)	14.8	13.8			6.58	6.13	34	Mg/L	Lbs/day			
C. Total organic Carbon (TOC)	<1.0						1	Mg/L	Lbs/day			
D. Total Suspended Solids (TSS)	31.0	28.9			3.06	2.86	37	Mg/L	Lbs/day			
E. Ammonia (as N)	9.73	9.07			3.11	2.90	37	Mg/L	Lbs/day			
F. Flow	VALUE 684		VALUE		VALUE 77.6		37	gpm		VALUE		
G. Temperature (winter)	VALUE 24.4		VALUE		VALUE 20		13	°C		VALUE		
H. Temperature (summer)	VALUE 32.8		VALUE		VALUE 26		13	°C		VALUE		
I. pH	MINIMUM 1.2	MAXIMUM 8.91	MINIMUM	MAXIMUM			37	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate-- Nitrate (as N)	X		12.9	12.0			2.75	2.57	37	Mg/l	Lbs/day			

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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		<0.20						1	Mg/l				
H. Oil and Grease	X		10.3	9.60				1.93	1.80	37	Mg/l	Lbs/day		
I. Phosphorus (as P) Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X		92.0	85.8				51.8	48.3	37	Mg/l	Lbs/day		
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		<50.0							1	ug/l			
S. Magnesium Total (7439-95-4)	X		14,400							1	ug/l			
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X	<5.0							1	ug/l			
V. Tin Total (7440-31-5)		X	<50.0							1	ug/l			
W. Titanium Total (7440-32-6)		X	<10.0							1	ug/l			

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE <i>(optional)</i>		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X	<10.0							1	ug/L			
2M. Beryllium, Total (7440-41-7)		X	<1.0							1	ug/L			
3M. Magnesium, Total (7439-95-4)	X		14,400							1	ug/L			
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X	<50.0							1	ug/L			
6M. Titanium, Total (7440-32-6)		X	<10.0							1	ug/L			
7M. Mercury, Total (7439-97-6)		X	<0.20							1	ug/L			
8M. Selenium, Total (7782-49-2)		X	<15.0							1	ug/L			
9M. Thallium, Total (7440-28-0)		X	<20.0							1	ug/L			
10M. Phenols, Total		X	<0.02							1	Mg/L			
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO.
Outfall 010

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)							1	Mg/L				
B. Chemical Oxygen Demand (COD)	80						1	Mg/L				
C. Total organic Carbon (TOC)	1.4						1	Mg/L				
D. Total Suspended Solids (TSS)	56.9	8.12			24.2	1.58	37	Mg/L	Lbs/day			
E. Ammonia (as N)	2928	205			1131	79.0	37	Mg/L	Lbs/day			
F. Flow	VALUE 15.4		VALUE		VALUE 5.81		37	gpm		VALUE		
G. Temperature (winter)	VALUE 18.4		VALUE		VALUE 10.0		15	°C		VALUE		
H. Temperature (summer)	VALUE 27.7		VALUE		VALUE 20.0		15	°C		VALUE		
I. pH	MINIMUM 6.55	MAXIMUM 8.48	MINIMUM	MAXIMUM			37	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate—Nitrate (as N)	X		1940	136			1021	71.3	37	Mg/L	Lbs/day			

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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		1907					1	Mg/l					
H. Oil and Grease	X		<0.1					1	Mg/l	Lbs/day				
I. Phosphorus (as P) Total (7723-14-0)		X												
J. Sulfate (as SO ⁴) (14808-79-8)	X		5.0	0.35				1	Mg/l	Lbs/day				
K. Sulfide (as S)		X												
L. Sulfite (as SO ³) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		<50.0					1	ug/L					
S. Magnesium Total (7439-95-4)	X		51,400					1	ug/L					
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X	<5.0					1	ug/L					
V. Tin Total (7440-31-5)		X	<50.0					1	ug/L					
W. Titanium Total (7440-32-6)		X	<10.0					1	ug/L					

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X	<10.0							ug/L				
2M. Beryllium, Total (7440-41-7)		X	<1.0							ug/L				
3M. Magnesium, Total (7439-95-4)	X		5,140							ug/L				
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X	<50.0							ug/L				
6M. Titanium, Total (7440-32-6)		X	<10.0							ug/L				
7M. Mercury, Total (7439-97-6)		X	<0.20							ug/L				
8M. Selenium, Total (7782-49-2)		X	<15.0							ug/L				
9M. Thallium, Total (7440-28-0)		X	<20.0							ug/L				
10M. Phenols, Total		X	<0.02							Mg/L				
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.
 (Use the same format)
 SEE INSTRUCTIONS

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
 Outfall 017

INTAKE AND EFFLUENT CHARACTERISTICS

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)	<0.1						1	Mg/L	Lbs/day			
E. Ammonia (as N)	0.51						1	Mg/L	Lbs/day			
F. Flow	VALUE 699.4		VALUE		VALUE		37	gpm		VALUE		
G. Temperature (winter)	VALUE 21.4		VALUE		VALUE		14	°C		VALUE		
H. Temperature (summer)	VALUE 30.3		VALUE		VALUE		14	°C		VALUE		
I. pH	MINIMUM 3.88	MAXIMUM 8.70	MINIMUM	MAXIMUM			37	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate—Nitrate (as N)	X		1.8						1	Mg/L				

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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 <i>(as N)</i>	X		1.8					1	Mg/L	Lbs/day				
H. Oil and Grease		X												
I. Phosphorus <i>(as P)</i> Total (7723-14-0)		X												
J. Sulfate <i>(as SO₄⁻)</i> (14808-79-8)	X		39					1	Mg/L	Lbs/day				
K. Sulfide <i>(as S)</i>		X												
L. Sulfite <i>(as SO₃⁻)</i> (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		0.025					1	ug/L					
S. Magnesium Total (7439-95-4)	X		11					1	ug/L					
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X							ug/L					
V. Tin Total (7440-31-5)		X							ug/L					
W. Titanium Total (7440-32-6)		X							ug/L					

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Beryllium, Total (7440-41-7)		X												
3M. Magnesium, Total (7439-95-4)	X		11							ug/L				
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X												
6M. Titanium, Total (7440-32-6)		X												
7M. Mercury, Total (7439-97-6)		X												
8M. Selenium, Total (7782-49-2)		X												
9M. Thallium, Total (7440-28-0)		X												
10M. Phenols, Total	X		<10							Mg/L				
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.
 (Use the same format)
 SEE INSTRUCTIONS

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO.
 Outfall 003 (RO)

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank or vary)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	10.5	9.79					1	Mg/l	Lbs/day			
B. Chemical Oxygen Demand (COD)	14.8	13.8			6.6	6.13	52	Mg/l	Lbs/day			
C. Total organic Carbon (TOC)	<1.0						1	Mg/l	Lbs/day			
D. Total Suspended Solids (TSS)	31.0	28.9			1.7		52	Mg/l	Lbs/day			
E. Ammonia (as N)	9.73	9.07			3.11	2.90	37	Mg/l	Lbs/day			
F. Flow	VALUE 684		VALUE		VALUE 129.8		52	gpm		VALUE		
G. Temperature (winter)	VALUE 24.4		VALUE		VALUE		13	°C		VALUE		
H. Temperature (summer)	VALUE 32.8		VALUE		VALUE		13	°C		VALUE		
I. pH	MINIMUM 6.6	MAXIMUM 9.5	MINIMUM	MAXIMUM			52	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 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate—Nitrate (as N)	X		12.9	12.0			2.75	2.57	37	Mg/l	Lbs/day			

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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					0.5		52	Mg/L				
H. Oil and Grease	X						3.6		52	Mg/L				
I. Phosphorus (as P) Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X		46						1	Mg/L				
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		0.039						1	Mg/L				
S. Magnesium Total (7439-95-4)	X		5.3						1	Mg/L				
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X												
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Beryllium, Total (7440-41-7)		X												
3M. Magnesium, Total (7439-95-4)	X		5.3						1	Mg/L				
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X												
6M. Titanium, Total (7440-32-6)		X												
7M. Mercury, Total (7439-97-6)		X												
8M. Selenium, Total (7782-49-2)		X												
9M. Thallium, Total (7440-28-0)		X												
10M. Phenols, Total		X	<10						1	ug/L				
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.
 (Use the same format)
 SEE INSTRUCTIONS

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO.
 Reject (RO)

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE 16		VALUE		VALUE		1	GPM		VALUE		
G. Temperature (winter)	VALUE 19.2		VALUE		VALUE		1	°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM	MAXIMUM 8.3	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 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate—Nitrate (as N)														

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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)														
H. Oil and Grease	X		4.8					1	Mg/L					
I. Phosphorus (as P) Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X		67					1	Mg/L					
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		0.011					1	Mg/L					
S. Magnesium Total (7439-95-4)	X		0.097					1	Mg/L					
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X												
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Beryllium, Total (7440-41-7)		X												
3M. Magnesium, Total (7439-95-4)	X													
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X												
6M. Titanium, Total (7440-32-6)		X												
7M. Mercury, Total (7439-97-6)		X												
8M. Selenium, Total (7782-49-2)		X												
9M. Thallium, Total (7440-28-0)		X												
10M. Phenols, Total		X	<10						1	ug/L				
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.
 (Use the same format)
 SEE INSTRUCTIONS

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS OUTFALL NO.
Blowdown (RO)

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE 0.6		VALUE		VALUE		1	GPM		VALUE		
G. Temperature (winter)	VALUE 29.9		VALUE		VALUE		1	°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM	MAXIMUM 8.23	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 2-a for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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 (16984-48-8)		X												
F. Nitrate—Nitrate (as N)														

1. POLLUTANT AND CAS NUMBER (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 AVRG. 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)														
H. Oil and Grease	X		4.0					1	Mg/L					
I. Phosphorus (as P) Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X													
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)		X												
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		0.077					1	Mg/L					
S. Magnesium Total (7439-95-4)	X		0.38					1	Mg/L					
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X												
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Beryllium, Total (7440-41-7)		X												
3M. Magnesium, Total (7439-95-4)	X													
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X												
6M. Titanium, Total (7440-32-6)		X												
7M. Mercury, Total (7439-97-6)		X												
8M. Selenium, Total (7782-49-2)		X												
9M. Thallium, Total (7440-28-0)		X												
10M. Phenols, Total		X	10						1	ug/L				
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

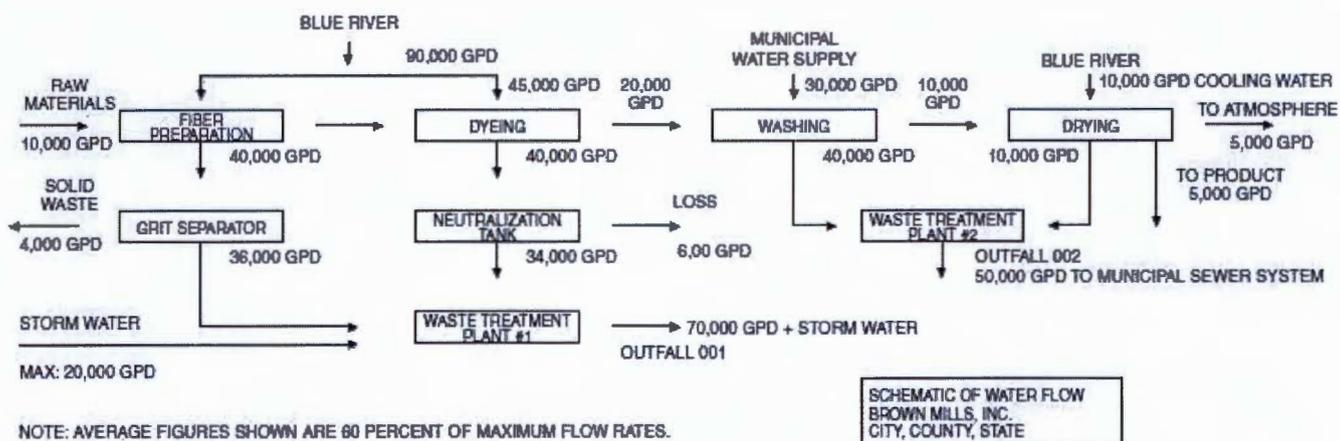
**INSTRUCTIONS FOR FILLING OUT APPLICATION FOR DISCHARGE
PERMIT FORM C – MANUFACTURING, COMMERCIAL, MINING AND
SILVICULTURE OPERATIONS.**

All blanks must be filled in when the application is submitted to the appropriate regional office (see map). The form must be signed as indicated.

This application is to be completed only for wastewater facilities with a discharge. Include any facility with possibility of discharge, even if normally there is no discharge. If this form is not adequate for you to describe your existing operation, then sufficient information should be attached so that an evaluation of the discharge can be made.

- 1.00 Name of Facility – By what title or name is this facility known locally?
- 1.10 and 1.20 Self-explanatory.
- 2.00 List in descending order of significance the four digit Standard Industrial Classification (SIC) codes that best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words.

SIC code numbers are descriptions that may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, that is available from the Government Printing Office, Washington, D.C. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, contact the Missouri Department of Natural Resources Regional office in your area (see map).
- 2.10 Point of discharge should be given in terms of the legal description of the waste treatment plant, location or sufficient information so that it may be located by the Missouri Clean Water Commission staff.
- 2.20 Receiving Water – the name of the stream to which the discharge is directed and any subsequent tributary until a continuous flowing stream is reached.
- 2.30 Self-explanatory.
- 2.40 A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water and storm water runoff. You may group similar operations into a single unit labeled to correspond to the more detailed listing. The water balance should show average and maximum flows. Show all significant losses of water to products, atmosphere, discharge and public sewer systems. You should use actual measurements whenever available; otherwise, use your best estimate. An example of any acceptable line drawing appears below.



B. List all sources of wastewater to each outfall. Operations may be described in general terms (for example, "dye-making reactor" or a distillation tower"). You may estimate the flow contributed by each source if no data is available, and for storm water, you may use any reasonable measure of duration, volume or frequency. For each treatment unit, indicate its size, flow rate and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table A to fill in column 3B for each treatment unit. Insert "XX" into column 3B if no code corresponds to a treatment unit you list.

TABLE A – CODES FOR TREATMENT UNITS

PHYSICAL TREATMENT PROCESSES

1-A	.....Ammonia Stripping	1-M	.....Grit Removal
1-B	.....Dialysis	1-N	.....Microstraining
1-C	.....Diatomaceous Earth Filtration	1-O	.....Mixing
1-D	.....Distillation	1-P	.....Moving Bed Filters
1-E	.....Electrodialysis	1-Q	.....Multimedia Filtration
1-F	.....Evaporation	1-R	.....Rapid Sand Filtration
1-G	.....Flocculation	1-S	.....Reverse Osmosis (Hyperfiltration)
1-H	.....Flotation	1-T	.....Screening
1-I	.....Foam Fractionation	1-U	.....Sedimentation (Settling)
1-J	.....Freezing	1-V	.....Slow Sand Filtration
1-K	.....Gas-Phase Separation	1-W	.....Solvent Extraction
1-L	.....Grinding (Comminutors)	1-X	.....Sorption

CHEMICAL TREATMENT PROCESSES

2-A	.....Carbon Absorption	2-G	.....Disinfection (Ozone)
2-B	.....Chemical Oxidation	2-H	.....Disinfection (Other)
2-C	.....Chemical Precipitation	2-I	.....Electrochemical Treatment
2-D	.....Coagulation	2-J	.....Ion Exchange
2-E	.....Dechlorination	2-K	.....Neutralization
2-F	.....Disinfection (Chlorine)	2-L	.....Reduction

BIOLOGICAL TREATMENT PROCESSES

3-A	.....Activated Sludge	3-E	.....Pre-Aeration
3-B	.....Aerated Lagoons	3-F	.....Spray Irrigation/Land Application
3-C	.....Anaerobic Treatment	3-G	.....Stabilization Ponds
3-D	.....Nitrification-Denitrification	3-H	.....Trickling Filtration

OTHER PROCESSES

4-A	.....Discharge to Surface Water	4-C	.....Reuse/Recycle of Treated Effluent
4-B	.....Ocean Discharge Through Outfall	4-D	.....Underground Injection

SLUDGE TREATMENT AND DISPOSAL PROCESSES

5-A	.....Aerobic Digestion	5-M	.....Heat Drying
5-B	.....Anaerobic Digestion	5-N	.....Heat Treatment
5-C	.....Belt Filtration	5-O	.....Incineration
5-D	.....Centrifugation	5-P	.....Land Application
5-E	.....Chemical Conditioning	5-Q	.....Landfill
5-F	.....Chlorine Treatment	5-R	.....Pressure Filtration
5-G	.....Composting	5-S	.....Pyrolysis
5-H	.....Drying Beds	5-T	.....Sludge Lagoons
5-I	.....Elutriation	5-U	.....Vacuum Filtration
5-J	.....Flotation Thickening	5-V	.....Vibration
5-K	.....Freezing	5-W	.....Web Oxidation
5-L	.....Gravity Thickening		

2.40 C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Maximum Daily" columns. Report the average of all daily values measures during days when discharge occurred within the last year in the "Long Term Average" columns.

2.50 A. All effluent guidelines promulgated by EPA appear in the Federal Register and are published annually in 40 CFR Subchapter N. A guideline applies to you if you have any operations contributing process wastewater in any subcategory covered by BPT, BCT, or BAT guidelines. If you are unsure whether you are covered by a promulgated effluent guideline, check with your Missouri Department of Natural Resources' Regional Office. You must check yes if an applicable effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check no.

B. An effluent guideline is expressed in terms of production (or other measure of operation) if the limitations are expressed as mass of pollutant per operational parameter; for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants.

C. This item must be completed only if you checked yes to item B. The production information requested here is necessary to apply effluent guidelines to your facility and you may not claim it as confidential. However, you do not have to indicate how the reported information was calculated.

Report quantities in the units of measurement used in the applicable effluent guideline. The figures provided must be a measure of actual operation over a one month period, such as the production for the highest month during the last twelve months, or the monthly average production for the highest year of the last five years, or other reasonable measure of actual operation, but may not be based on design capacity or on predictions of future increases in operation.

2.60 A. If you check yes to this question, complete all parts of the chart, or attach a copy of any previous submission you have made containing the same information.

B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

3.00 These items require you to collect and report data on the pollutants discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

GENERAL INSTRUCTIONS. Part A requires you to report at least one analysis for each pollutant. Part B requires you to mark "X" in either the "Believe Present" column or the "Believe Absent" column (column 2A or 2B, Part B) based on you best estimate, and test for those which you believe to be present. Part C requires you to list any of a group of pollutants which you believe to be present, with a brief explanation of why you believe it to be present. (See specific instructions on the form and below Parts A through C).

Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or of any similar effluent. (For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated storm water runoff.) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

REPORTING. All levels must be reported as a concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper. (Use the following abbreviations in the columns headed "Units" (column 3, Part A, and column 4, Part B).

CONCENTRATION

ppm	.....	parts per million
mg/L	.....	milligrams per liter
ppb	.....	parts per billion
ug/L	.....	micrograms per liter

MASS

lbs	.....	pounds
ton	.....	tons (English tons)
mg	.....	Milligrams
g	.....	grams
kg	.....	kilograms
T	.....	tonnes (metric tons)

If you measure only one daily value, complete only the "Maximum Daily Values" columns and insert "1" into the "number of analyses" columns (columns 2A and 2B, Part A, and columns 3A and 3D, Part B). The Missouri Department of Natural Resources may require you to conduct additional analyses to further characterize your discharges.

For composite samples, the daily value is the total mass or average concentration found in a complete sample taken over the operating hours of the facility during a 24 hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24 hour period.

If you measure more than one daily value for a pollutant, determine the average of all values within the last year and report the concentration and mass under the "Long Term Average Values" columns (column 2C, Part A, and column 3C, Part B), and the total number of daily values under the "Number of Analyses" columns (column 2D, Part A, and column 3D, Part B). Also, determine the average of all daily values taken during each calendar month, and report the highest average of all daily values taken during each calendar month, and report the highest average under the "Maximum 30 Day Values" columns (column 2B, Part A, and column 3B, Part B).

SAMPLING. The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. You may contact your Missouri Department of Natural Resources' Regional Office for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit or at any site adequate for the collection of a representative sample.

Grab and composite samples are defined as follows:

GRAB SAMPLE. An individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

COMPOSITE SAMPLE. A combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24 hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

ANALYSIS. You must use test methods promulgated in 40 CFR Part 136; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding times, preservation techniques and the quality control measures which you used.

If you have two or more substantially identical outfalls, you may request permission from the Missouri Department of Natural Resources to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the Missouri Department of Natural Resources, on a separate sheet attached to the application form, identify which outfall you did test and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

REPORTING OF INTAKE DATA. You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. National Pollutant Discharge Elimination System (NPDES) regulations allow net limitations only in certain circumstances. To demonstrate your eligibility, under the Intake columns report the average of the results of analyses on your intake water (if your water is treated before use, test the water after it is treated), and attach a separate sheet containing the following for each pollutant:

1. A statement that the intake water is drawn from the body of water into which the discharge is made. (Otherwise, you are not eligible for net limitations.)
2. A statement of the extent to which the level of the pollutant is reduced by treatment of your wastewater. (Your limitations will be adjusted only to the extent that the pollutant is not removed.)
3. When applicable, a demonstration of the extent to which the pollutants in the intake vary physically, chemically, or biologically from the pollutants contained in your discharge. For example, when the pollutant represents a class of compounds. Your limitations will be adjusted only to the extent that the intake pollutants do not vary from the discharged pollutants.

3.00 Part A must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. However, at your request, the Missouri Department of Natural Resources may waive the requirements to test for one or more of these pollutants, upon a determination that testing for the pollutant(s) is not appropriate for your effluent.

Use composite samples for all pollutants in this part, except use grab samples for pH and temperature. See discussion in instructions above for definitions of the columns in Part A. The "Long Term Average Values" column (column 2C) and "Maximum 30 Day Values" column (column 2B) are not compulsory but should be filled out if data is available.

3.00 Part B must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff.

Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease and fecal coliform. The Long Term Average Values column (column 3C) and Maximum 30 Day Values column (column 3B) are not compulsory but should be filled out if data is available.

3.00 List any pollutants in Table B that you believe to be present and explain why you believe them to be present in part C. No analysis is required, but you have analytical, you must report it.

TABLE B – TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT

TOXIC POLLUTANT	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Asbestos	Dichlorvos	Nalad
	Diethylamine	Napthenic acid
HAZARDOUS SUBSTANCES	Dimethylamine	Nitrotoluene
	Dintrobenzene	Parathion
Acetaldehyde	Diquat	Phenolsulfonate
Allyl alcohol	Disulfoton	Phosgene
Allyl chloride	Diuron	Propargite
Amyl acetate	Epichlorohydrin	Propylene oxide
Aniline	Ethion	Pyrethrins
Benzonitrile	Ethylene diamine	Quinoline
Benzyl chloride	Ethylene dibromide	Resorcinol
Butyl acetate	Formaldehyde	Strontium
Butylamine	Furfural	Strychnine
Captan	Guthion	Styrene

TABLE B – (continued)

HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Carbaryl	Isoprene	2, 4, 5-T (2,4,5-Trichloro- phenoxyacetic acid)
Carbofuran	Isopropanolamine	TDE (Tetrachlorodiphenyl ethane)
Carbon disulfide	Kelthane	2, 4, 5-TP (2-(2,4,5-Trichloro- phenoxy) propanoic acid)
Chlorpyrifos	Kepone	Trichlorofon
Coumaphos	Malathion	Triethanolamine
Cresol	Mercaptodimethur	Triethylamine
Crotonaldehyde	Methoxychlor	Uranium
2,4-D (2,4-Dichloro- Phenoxyacetic acid)	Methyl mercaptan	Vanadium
Diazinon	Methyl parathion	Vinyl acetate
Dicamba	Mevinphos	Xylene
Dichlobenil	Mexacarbate	Xylenol
2,2-Dichloropropionic acid	Monomethyl amine	Zirconium

3.10 Self-explanatory. Additional information may be requested by the Missouri Department of Natural Resources.

3.20 Self-explanatory.

3.30 The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application . . . shall upon conviction, be punished by a fine of no more \$10,000 or by imprisonment for not more than six months, or both.

All applications must be signed as follows and the signature must be original.

- A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
- B. For a partnership or sole proprietorship, by a general partner or the proprietor.
- C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet
(Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. 001
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PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)							1					
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 8.1	MAXIMUM 8.1	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

A. Bromide (24959-67-9)		X											
B. Chlorine, Total Residual	X		1.8	mg/l				1					
C. Color		X											
D. Fecal Coliform		X											
E. Fluoride (16984-48-8)		X											
F. Nitrate - Nitrate (as N)		X											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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		0.08	mg/l										
H. Oil and Grease		X												
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X		16	mg/l					1					
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)	X		0.016	mg/l					1					
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.02	mg/l					1					
S. Magnesium, Total (7439-95-4)	X		18	mg/l					1					
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)	X		0.012	mg/l										
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.053	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Outfall 001F

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	☐	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	☐	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	L	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	☐	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	☐	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	☐	☐												
17M. Titanium Total (7440-32-6)	—	☐	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	☐	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Outfall 001F

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	✓	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	✓	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	✓	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	✓	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	✓	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	✓	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	✓	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	✓	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	✓	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	□	✓	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	□	✓	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	L	✓	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	✓	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	✓	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	✓	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	□												
17M. Titanium Total (7440-32-6)	—	□	✓	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	✓	□	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Outfall 001F

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven 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. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
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5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
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9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
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12M. Nickel, Total (7440-02-0)	—	□	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	□	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	□												
17M. Titanium Total (7440-32-6)	—	□	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	□	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER
	Outfall 001F

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	☐	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	☐	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	☐	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	☐	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	☐	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	☐	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	☐	☐												
17M. Titanium Total (7440-32-6)	—	☐	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	☐	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Outfall 001F

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	✓	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	✓	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	✓	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	✓	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	✓	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	✓	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	✓	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	✓	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	✓	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	□	✓	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	□	✓	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	□	✓	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	□	✓	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	✓	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	✓	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	□												
17M. Titanium Total (7440-32-6)	—	□	✓	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	✓	□	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER
	Outfall 001F

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	□	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	□	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	L	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	☐												
17M. Titanium Total (7440-32-6)	—	□	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	L	0.052	P					1	mg/l				

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER
	Outfall 001F

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
	METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	□	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	□	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	L	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	☐												
17M. Titanium Total (7440-32-6)	—	□	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	L	0.052	P					1	mg/l				

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. 004
--	--------------------

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. 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)	4.2	mg/l					1					
B. Chemical Oxygen Demand (COD)	19	mg/l										
C. Total organic Carbon (TOC)	7.1	mg/l										
D. Total Suspended Solids (TSS)	57	mg/l										
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 7.4	MAXIMUM 7.4	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

A. Bromide (24959-67-9)		X											
B. Chlorine, Total Residual		X											
C. Color	X		40	mg/l									
D. Fecal Coliform		X											
E. Fluoride (16984-48-8)		X											
F. Nitrate - Nitrate (as N)	X		2.7	mg/l									

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)	X		1.4	mg/l					1					
H. Oil and Grease		X												
I. Phosphorus (as P), Total (7723-14-0)	X		0.33	mg/l					1					
J. Sulfate (as SO ₄) (14808-79-8)	X		9.3	mg/l					1					
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)	X		0.3	mg/l					1					
O. Barium, Total (7440-39-3)	X		0.039	mg/l					1					
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.4	mg/l					1					
S. Magnesium, Total (7439-95-4)	X		18	mg/l					1					
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)	X		0.012	mg/l										
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.053	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER
	Outfall 004

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	✓	<0.02	ND				1	mg/l					
2M. Arsenic, Total (7440-38-2)	—	L	✓	<0.02	ND				1	mg/l					
3M. Beryllium, Total (7440-41-7)	—	L	✓	<0.005	ND				1	mg/l					
4M. Cadmium, Total (7440-43-9)	—	L	✓	<0.002	ND				1	mg/l					
5M. Chromium III (16065-83-1)	—	L	✓	<0.004	ND				1	mg/l					
6M. Chromium VI (18540-29-9)	—	L	✓	<0.004	ND				1	mg/l					
7M. Copper, Total (7440-50-8)	—	L	✓	<0.03	ND				1	mg/l					
8M. Lead, Total (7439-92-1)	—	L	✓	<0.01	ND				1	mg/l					
9M. Magnesium Total (7439-95-4)	—	L	✓	<0.05	ND				1	mg/l					
10M. Mercury, Total (7439-97-6)	—	□	✓	<0.0002	ND				1	mg/l					
11M. Molybdenum Total (7439-98-7)	—	□	✓	<0.01	ND				1	mg/l					
12M. Nickel, Total (7440-02-0)	—	□	✓	<0.01	ND				1	mg/l					
13M. Selenium, Total (7782-49-2)	—	□	✓	<0.01	ND				1	mg/l					
14M. Silver, Total (7440-22-4)	—	□	✓	<0.01	ND				1	mg/l					
15M. Thallium, Total (7440-28-0)	—	□	✓	<0.01	ND				1	mg/l					
16M. Tin Total (7440-31-5)	—	□	□												
17M. Titanium Total (7440-32-6)	—	□	✓	<0.005	ND				1	mg/l					
18M. Zinc, Total (7440-66-6)	—	✓	□	0.12	P				1	mg/l					

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	P					1	ug/l				
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	>10	ND					1	ug/l				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS											
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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
12V. Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
13V. Dichloro-difluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
14V. 1,1 – Dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
15V. 1,2 – Dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
16V. 1,1 – Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
17V. 1,3 – Dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
18V. 1,2 –Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING RE-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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
28V. 1,1,2 – Tri-chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4A. 4,6 – Dinitro - O- Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND					1	ug/l				
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11A. 2,4,6 – Trichloro-phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<80	ND					1	ug/l				
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6B. Benzo (a) Pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7B. 3,4 – Benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
16B. 2-Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
20B. 1,2 – Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
21B. 1,3 – Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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 AVRG. 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-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
29B. Di-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
35B. Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. YES-ING 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 AVRG. 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)															
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
43B. N-Nitro- sodiphenylamine (86-30- 6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
46B. 1,2,4-Tri chlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				

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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES (continued)															
17P. Heptachlor Epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND						1	ug/l			
18P. PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
19P. PBC-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
20P. PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
21P. PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
22P. PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
23P. PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
24P. PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
25P. Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND						1	ug/l			
J. RADIOACTIVITY															
(1) Alpha Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(2) Beta Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(3) Radium Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(4) Radium 226 Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet
(Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. 011
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PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	9.6	mg/l					1					
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 7.6	MAXIMUM 7.6	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

A. Bromide (24959-67-9)		X											
B. Chlorine, Total Residual	X		1.4	mg/l					1				
C. Color		X											
D. Fecal Coliform		X											
E. Fluoride (16984-48-8)	X		0.338	mg/l					1				
F. Nitrate - Nitrate (as N)		X											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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. Sulfate (as SO ₄) (14808-79-8)	X		16	mg/l					1					
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)	X		0.017	mg/l					1					
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.041	mg/l					1					
S. Magnesium, Total (7439-95-4)	X		18	mg/l					1					
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)		X												
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.052	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Outfall 11

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	✓	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	✓	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	✓	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	✓	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	✓	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	✓	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	✓	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	✓	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	✓	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	□	✓	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	□	✓	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	□	✓	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	□	✓	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	□	✓	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	□	✓	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	□	□												
17M. Titanium Total (7440-32-6)	—	□	✓	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	✓	□	0.052	P					1	mg/l				

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	P					1	ug/l				
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	>10	ND					1	ug/l				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS											
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	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)			A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
12V. Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
13V. Dichloro-difluoromethane (75-71-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
14V. 1,1 – Dichloroethane (75-34-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
15V. 1,2 – Dichloroethane (107-06-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
16V. 1,1 – Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
17V. 1,3 – Dichloropropane (78-87-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
18V. 1,2 –Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING RE-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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
23V. 1,1,2,2 – Tetrachloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
28V. 1,1,2 – Tri – chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4A. 4,6 – Dinitro – O – Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND					1	ug/l				
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11A. 2,4,6 – Trichloro – phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<80	ND					1	ug/l				
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6B. Benzo (a) Pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7B. 3,4 – Benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
16B. 2-Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
20B. 1,2 – Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
21B. 1,3 – Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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 AVRG. 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-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
29B. Di-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
35B. Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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)															
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
43B. N-Nitro-sodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
46B. 1,2,4-Tri chlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				

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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND						1	ug/l			
18P. PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
19P. PBC-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
20P. PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
21P. PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
22P. PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
23P. PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
24P. PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
25P. Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND						1	ug/l			
J. RADIOACTIVITY															
(1) Alpha Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(2) Beta Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(3) Radium Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(4) Radium 226 Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. HVACBOOST
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PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)							1					
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)	1.9	mg/l					1					
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)	1.1	mg/l					1					
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
I. pH	MINIMUM 5.8	MAXIMUM 5.8	MINIMUM	MAXIMUM					STANDARD UNITS			

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

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 - Nitrate (as N)	X		0.15	mg/l					1				

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)	X		1.3	mg/l					1					
H. Oil and Grease		X												
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)		X												
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)		X												
P. Boron, Total (7440-42-8)	X		0.086	mg/l					1					
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.012	mg/l					1					
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)		X												
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.75	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER HVACBOOST

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	└	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	└	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	└	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	└	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	└	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	└	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	└	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	└	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	└	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	☐	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	☐	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	└	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	└	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	☐	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	☐	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	☐	☐												
17M. Titanium Total (7440-32-6)	—	☐	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	└	0.75	P					1	mg/l				

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	P					1	ug/l				
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	>10	ND					1	ug/l				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS											
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TES-ING RE-QUIRED	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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
12V. Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
13V. Dichloro-difluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
14V. 1,1 – Dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
15V. 1,2 – Dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
16V. 1,1 – Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
17V. 1,3 – Dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
18V. 1,2 –Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING RE-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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
23V. 1,1,2,2 – Tetra- chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
28V. 1,1,2 – Tri- chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4A. 4,6 – Dinitro - O- Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND					1	ug/l				
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
10A. Phenol (108-95-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11A. 2,4,6 – Trichloro- phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<80	ND					1	ug/l				
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6B. Benzo (a) Pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7B. 3,4 – Benzo(a)fluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
16B. 2-Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
20B. 1,2 – Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
21B. 1,3 – Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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 AVRG. 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 <i>(continued)</i>														
22B. 1, 4-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
29B. DI-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
35B. Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			

CONTINUED FROM THE FRONT

1. POLLUTANT AND GAS 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 AVRG. 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)															
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
43B. N-Nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
46B. 1,2,4-Tri chlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				

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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES (continued)															
17P. Heptachlor Epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND						1	ug/l			
18P. PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
19P. PBC-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
20P. PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
21P. PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
22P. PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
23P. PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
24P. PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT											
25P. Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND						1	ug/l			
J. RADIOACTIVITY															
(1) Alpha Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(2) Beta Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(3) Radium Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(4) Radium 226 Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet
(Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. HVACEMUL
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PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	7.5	mg/l					1					
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)	3.9	mg/l					1					
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)	14	mg/l					1					
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
I. pH	MINIMUM 7.5	MAXIMUM 7.5	MINIMUM	MAXIMUM					STANDARD UNITS			

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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 <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

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 - Nitrate (as N)	X		0.15	mg/l					1					

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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		12	mg/l					1					
H. Oil and Grease	X		6.7	mg/l					1					
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ⁴) (14808-79-8)		X												
K. Sulfide (as S)		X												
L. Sulfite (as SO ³) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)	X		0.34	mg/l					1					
O. Barium, Total (7440-39-3)		X												
P. Boron, Total (7440-42-8)	X		0.38	mg/l					1					
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.021	mg/l					1					
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)		X												
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.052	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER HVACEMUL

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven 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. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
	METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	L	☑	<0.03	ND					1	mg/l				
8M. Lead, Total (7439-92-1)	—	L	☑	<0.01	ND					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	L	☑	<0.05	ND					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	☐	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	☐	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	L	☑	<0.01	ND					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	☐	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	☐	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	☐	☐												
17M. Titanium Total (7440-32-6)	—	☐	☑	<0.005	ND					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	L	0.052	P					1	mg/l				

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	P					1	ug/l				
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	>10	ND					1	ug/l				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS											
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	4. UNITS		5. INTAKE (optional)		
	A. TES-ING RE-QUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
12V. Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
13V. Dichloro-difluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
14V. 1,1 – Dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
15V. 1,2 – Dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
16V. 1,1 – Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
17V. 1,3 – Dichloropropane (78-87-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
18V. 1,2 –Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING RE-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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1)	(2)	
													CONCENTRATION	MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
23V. 1,1,2,2 – Tetra- chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
28V. 1,1,2 – Tri- chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4A. 4,6 – Dinitro - O- Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND					1	ug/l				
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11A. 2,4,6 – Trichloro- phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<80	ND					1	ug/l				
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6B. Benzo (a) Pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7B. 3,4 – Benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
16B. 2-Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
20B. 1,2 – Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
21B. 1,3 – Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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 AVRG. 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-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
26B. Di-N-butyl Phthalate (84-74-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25	P						1	ug/l			
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
29B. Di-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
35B. Hexachloro-cyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TES-ING 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 AVRG. 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)															
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
43B. N-Nitro- sodiphenylamine (86-30- 6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
46B. 1,2,4-Tri chlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				

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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES (continued)															
17P. Heptachlor Epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND						1	ug/l			
18P. PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
19P. PBC-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
20P. PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
21P. PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
22P. PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
23P. PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
24P. PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
25P. Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND						1	ug/l			
J. RADIOACTIVITY															
(1) Alpha Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(2) Beta Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(3) Radium Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(4) Radium 226 Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet
 (Use the same format) instead of completing these pages.
 SEE INSTRUCTIONS

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS	OUTFALL NO. Laundry
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PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. 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)	31	mg/l					1					
B. Chemical Oxygen Demand (COD)	160	mg/l					1					
C. Total organic Carbon (TOC)	25	mg/l					1					
D. Total Suspended Solids (TSS)	26	mg/l					1					
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM					STANDARD UNITS			

PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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 <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual		X												
C. Color	X		60	Units				1						
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)			0.52	mg/l				1						
F. Nitrate - Nitrate (as N)			4.9	mg/l				1						

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. 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		16	mg/l					1					
H. Oil and Grease	X		130	mg/l					1					
I. Phosphorus (as P), Total (7723-14-0)	X		.47	mg/l					1					
J. Sulfate (as SO ⁴) (14808-79-8)	X		17	mg/l					1					
K. Sulfide (as S)		X												
L. Sulfite (as SO ³) (14265-45-3)		X												
M. Surfactants	X		4	mg/l					1					
N. Aluminum, Total (7429-90-5)	X		0.53	mg/l					1					
O. Barium, Total (7440-39-3)	X		0.016	mg/l					1					
P. Boron, Total (7440-42-8)	X		0.094	mg/l					1					
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.68	mg/l					1					
S. Magnesium, Total (7439-95-4)	X		0.8	mg/l					1					
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)	X		0.0053	mg/l					1					

1. POLLUTANT AND CAS NUMBER (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 AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)		X												
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)	X		0.018	mg/l					1					
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		1.1	mg/l					1					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER Laundry Water

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A 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. 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 to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING REQUIRED	B. BELIEVE D PRESENT	C. BELIEVE D 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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	—	L	☑	<0.02	ND					1	mg/l				
2M. Arsenic, Total (7440-38-2)	—	L	☑	<0.02	ND					1	mg/l				
3M. Beryllium, Total (7440-41-7)	—	L	☑	<0.005	ND					1	mg/l				
4M. Cadmium, Total (7440-43-9)	—	L	☑	<0.002	ND					1	mg/l				
5M. Chromium III (16065-83-1)	—	L	☑	<0.004	ND					1	mg/l				
6M. Chromium VI (18540-29-9)	—	L	☑	<0.004	ND					1	mg/l				
7M. Copper, Total (7440-50-8)	—	☑	L	0.084	P					1	mg/l				
8M. Lead, Total (7439-92-1)	—	☑	L	0.033	P					1	mg/l				
9M. Magnesium Total (7439-95-4)	—	☑	L	0.8	P					1	mg/l				
10M. Mercury, Total (7439-97-6)	—	☐	☑	<0.0002	ND					1	mg/l				
11M. Molybdenum Total (7439-98-7)	—	☐	☑	<0.01	ND					1	mg/l				
12M. Nickel, Total (7440-02-0)	—	☑	L	0.018	P					1	mg/l				
13M. Selenium, Total (7782-49-2)	—	L	☑	<0.01	ND					1	mg/l				
14M. Silver, Total (7440-22-4)	—	☐	☑	<0.01	ND					1	mg/l				
15M. Thallium, Total (7440-28-0)	—	☐	☑	<0.01	ND					1	mg/l				
16M. Tin Total (7440-31-5)	—	☐	☐												
17M. Titanium Total (7440-32-6)	—	☑	☐	0.0053	P					1	mg/l				
18M. Zinc, Total (7440-66-6)	—	☑	L	1.1	P					1	mg/l				

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.015	P					1	ug/l				
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	>10	ND					1	ug/l				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS											
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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
4V. Bis (Chloromethyl) Ether (542-88-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
12V. Dichlorobromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
13V. Dichloro-difluoromethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
14V. 1,1 – Dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
15V. 1,2 – Dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
16V. 1,1 – Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
17V. 1,3 – Dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
18V. 1,2 –Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING RE-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 AVRG. 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
28V. 1,1,2 – Tri-chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4A. 4,6 – Dinitro - O-Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND					1	ug/l				
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<50	ND					1	ug/l				
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11A. 2,4,6 – Trichloro-phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATI'N	(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)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<80	ND					1	ug/l				
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
6B. Benzo (a) Pyrene (50-32-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
7B. 3,4 – Benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
12B. Bis (2- Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	42	P					1	ug/l				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
16B. 2- Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
20B. 1,2 – Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
21B. 1,3 – Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				

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 AVRG. 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-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12	P						1	ug/l			
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24	P						1	ug/l			
29B. Di-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
35B. Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<20	ND						1	ug/l			
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND						1	ug/l			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TES-ING 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 AVRG. 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)															
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
43B. N-Nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
46B. 1,2,4-Tri chlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<10	ND					1	ug/l				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND					1	ug/l				
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<1	ND					1	ug/l				
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND					1	ug/l				

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 AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES (continued)															
17P. Heptachlor Epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<0.5	ND						1	ug/l			
18P. PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
19P. PBC-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
20P. PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
21P. PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
22P. PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
23P. PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
24P. PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
25P. Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<5	ND						1	ug/l			
J. RADIOACTIVITY															
(1) Alpha Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(2) Beta Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(3) Radium Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										
(4) Radium 226 Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		NT										

Date: 9-28-17

Leadperson: Jim

Booster Plant COA - Orca

Shift: Day Eve Grave

Time	6:00	7:00	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00
Booster Size	BC0454	BC454	BC454	BC454	BC454	BC454	BC454	BC454	BC454	BC454	BC454	BC454
Booster Weight (g)	433	436.5	438	441	439.5	442.5	434	436.5	434	432.5	428.5	427
Date Code (#)	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1	285E17J1
Chips/Spills on Outside (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N
Surface Smooth, within 1/8" of Top (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tunnels Unrestricted (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cup Art Work Clear (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Case Count (Qty)	36	36	36	36	36	36	36	36	36	36	36	36
Batch # on Box	9-317	9-318	9-316	9-320	9-321	9-321	9-323	9-323	9-324	9-324	9-326	9-326
Vision System Working Properly (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Correct Box & Art Work Clear (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Correct Do(s)/Don't(s) Pamphlet (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Liner in Case (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Shooting Sample(s)	/											

CASES PER BATCH NUMBER

BATCH NUMBER	9-315	9-313	9-317	9-318	9-316	9-320	9-321	9-319	9-323	9-324	9-322	9-322	9-326
CASES PRODUCED	50	25	75	70	30	70	70	35	75	75	25	5	45
SIZE	BC454												
TOTAL	50	75	150	220	250	320	390	425	500	575	600	5	50

Orca

Sample for lab	Size	Batch #	Intials	Size	Count	Weight Range, g
	BC454	9-317	Jim	BC0200	72	190-210
			BC0340	49	333-368	
			BC0454	36	428-473	
			DX0454	36	420-460	

Quality Department: _____

If any parameter is outside tolerance, contact your supervisor.

Date: 09/28/17

Booster Plant COA - Orca

Leadperson: Shane
 Shift: Day Eve Grave

Time	6:00	7:00	8:00	9:00	10:00	11:00	12:00	1:00	2:00	3:00	4:00	5:00
Booster Size	BC454	BC454	BC454									
Booster Weight (g)	441.3	444.1	442.7									
Date Code (#)	285E17J2	285E17J2	285E17J2									
Chips/Spills on Outside (Y/N)	N	N	N									
Surface Smooth, within 1/8" of Top (Y/N)	Y	Y	Y									
Tunnels Unrestricted (Y/N)	Y	Y	Y									
Cup Art Work Clear (Y/N)	Y	Y	Y									
Case Count (Qty)	36	36	36									
Batch # on Box	9-326	9-326	9-325									
Vision System Working Properly (Y/N)	Y	Y	Y									
Correct Box & Art Work Clear (Y/N)	Y	Y	Y									
Correct Do(s)/Don't(s) Pamphlet (Y/N)	Y	Y	Y									
Liner in Case (Y/N)	Y	Y	Y									
Shooting Sample(s)	1	Y	Y									

CASES PER BATCH NUMBER

BATCH NUMBER	9-322	9-326	9-325									
CASES PRODUCED	5	75	20									
SIZE	BC454	BC454	BC454									
TOTAL	5	80	100									

Orca

Sample for lab	Size	Batch #	Initials	Size	Count	Weight Range, g
	BC454	9-326	AMT	BC0200	72	190-210
			BC0340	49	333-368	
			BC0454	36	428-473	
			DX0454	36	420-460	

Quality Department: _____

If any parameter is outside tolerance,
 contact your supervisor.