REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

NPDES Permit No TX0134088

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Port Arthur LNG, LLC
2925 Briarpark Drive, Suite 900
Houston, TX 77042

is authorized to discharge from a facility located at Oil Field Road, Port Arthur, TX 77642 to an unnamed intermittent stream that ultimately flows into the the Sabine-Neches Canal Tidal Waterway (Segment 0703), from approximately:

Outfall 001: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 002: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 003: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 004: Latitude N 29º 47' 07" Longitude W 93º 56' 56"
Outfall 101: Internal outfall, final discharge from Outfalls 001, 002, 003, and 004

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II and Part III hereof.

This first-time permit, prepared by Matias C. Fernandez, Life Scientist, Permitting Section (6WD-PE), shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

_____

Charles W. Maguire
Director
Water Division (6WD)

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

BAT	Best Available Technology Economically Achievable
BOD5	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
F&WS	United States Fish and Wildlife Service
GPD	Gallon per day
IP	Procedures to Implement the Texas Surface Water Quality Standards
µg/l	Micrograms per liter (one part per billion)
mg/L	Milligrams per liter (one part per million)
MMCFD	Million cubic feet per day
MGD	Million gallons per day
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
RRC	Railroad Commission of Texas
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TDS	Total dissolved solids
TMDL	Total maximum daily load
TOC	Total Organic Carbon
TRC	Total residual chlorine
TSS	Total suspended solids
TSWQS	Texas Surface Water Quality Standards
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan
WQS	Water Quality Standard

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfalls 001 - Effluent Limits

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge process wastewater (natural gas cleanup system, servicing and cleaning of turbine drives and compressors, hydrostatic tests), non-process wastewater (water treatment system, emergency eyewash and safety shower testing and use, firefighting system testing and use, condensation on equipment, overflow from demineralized and potable water storage, equipment and building wash down, work surface cleaning, line and equipment flushing, dust control, landscaping drainage, and water pipeline leaks), and stormwater from Outfall 001 to the Sabine-Neches Canal Tidal (Segment 0703) of the Neches-Trinity Coastal Basin. Such discharges shall be limited and monitored by the permittee and reported as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
POLLUTANT	*MINIMUM*	*MAXIMUM*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
pH	6.5 s.u.	9.0 s.u.	Weekly	Instantaneous Grab (*2)

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/L, unless noted			
POLLUTANT	*MONTHLY AVG.*	*DAILY MAX.*	*MONTHLY AVG.*	*DAILY MAX.*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
Flow	Report MGD	Report MGD	N/A	N/A	Daily/Continuous	Totalized Meter
TRC	N/A	N/A	N/A	19 ug/L	Weekly	Instantaneous Grab (*2)
O&G	N/A	N/A	10	15	Weekly	Grab
TSS	N/A	N/A	Report	100	Weekly	Grab
TOC	N/A	N/A	Report	50	Weekly	Grab
Dissolved Oxygen (*3)	N/A	N/A	5.0	N/A	Weekly	Grab
Dissolved Oxygen, Spring (*4)	N/A	N/A	5.0	N/A	Weekly	Grab
Visible Oil Sheen	N/A	N/A	Report (*5)	Report (*5)	Daily	Visual
Phenanthrene	N/A	N/A	Report	Report	Weekly	Grab
Benzo(*a*)anthracene	N/A	N/A	0.854 ug/L	1.81 ug/L	Weekly	Grab
Benzo(*a*)pyrene	N/A	N/A	0.085 ug/L	0.181 ug/L	Weekly	Grab
Hexachlorobenzene	N/A	N/A	0.023 ug/L	0.049 ug/L	Weekly	Grab
Hexachlorobutadiene	N/A	N/A	7.52 ug/L	15.9 ug/L	Weekly	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
*WHOLE EFFLUENT TOXICITY (7 Day Static Renewal) (*6)*	*VALUE*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
Americamysis bahia	**Report**	**Once/Quarter**	**24-Hr Composite**
Menidia beryllina	**Report**	**Once/Quarter**	**24-Hr Composite**

Footnotes:
***1** When discharge occurs.
***2** For instantaneous grab, sample shall be analyzed within 15 minutes of collection.
***3** The minimum dissolved oxygen limit shall be 3.0 mg/l, with a mean DO of 5.0 mg/l.
***4** In the spring, the minimum dissolved oxygen limit shall be 4.0 mg/l, with a mean DO of 5.0 mg/l. Spring is from March to June.
***5** Record the total number of days where an oil sheen is visible at the outfalls.
***6** Monitoring and reporting requirements begin on the effective date of this permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

2. Internal Outfall 101 - Effluent Limits

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge hydrostatic test process wastewater from Internal Outfall 101 to the Sabine-Neches Canal Tidal (Segment 0703) of the Neches-Trinity Coastal Basin via Outfalls 001, 002, 003, and 004. Such discharges shall be limited and monitored by the permittee and reported as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
POLLUTANT	*MINIMUM*	*MAXIMUM*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
pH	**6.5 s.u.**	**9.0 s.u.**	Daily	Instantaneous Grab (*2)

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/L, unless noted			
POLLUTANT	*MONTHLY AVG.*	*DAILY MAX.*	*MONTHLY AVG.*	*DAILY MAX.*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
Flow	Report MGD	Report MGD	N/A	N/A	Daily	Estimate
TRC	N/A	N/A	N/A	**0.019**	Daily	Instantaneous Grab (*2)
O&G	N/A	N/A	**10**	**15**	Daily	Grab
TSS	N/A	N/A	**30**	**45**	Daily	Grab
TOC	N/A	N/A	Report	**50**	Daily (*3)	Grab
Benzene	N/A	N/A	Report	**0.005**	Daily (*3)	Grab
BTEX	N/A	N/A	Report	**0.1**	Daily (*3)	Grab

Footnotes:

***1** When discharge occurs.

***2** For instantaneous grab, sample shall be analyzed within 15 minutes of collection.

***3** When testing used piping and containers.

3. Outfalls 002, 003, & 004 - Effluent Limits

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge process wastewater (hydrostatic tests), non-process wastewater (water treatment system, emergency eyewash and safety shower testing and use, firefighting system testing and use, condensation on equipment, overflow from demineralized and potable water storage, equipment and building wash down, work surface cleaning, line and equipment flushing, dust control, landscaping drainage, and water pipeline leaks), and stormwater from Outfalls 002, 003, and 004 to the Sabine-Neches Canal Tidal (Segment 0703) of the Neches-Trinity Coastal Basin. Such discharges shall be limited and monitored by the permittee and reported as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
POLLUTANT	*MINIMUM*	*MAXIMUM*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
pH	**6.5 s.u.**	**9.0 s.u.**	Weekly	Instantaneous Grab (*2)

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/L, unless noted			
POLLUTANT	*MONTHLY AVG.*	*DAILY MAX.*	*MONTHLY AVG.*	*DAILY MAX.*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
Flow	Report MGD	Report MGD	N/A	N/A	Daily/Continuous	Totalized Meter
TRC	N/A	N/A	N/A	**0.019**	Weekly	Instantaneous Grab (*2)
O&G	N/A	N/A	**10**	**15**	Weekly	Grab
TSS	N/A	N/A	Report	**100**	Weekly	Grab
TOC	N/A	N/A	Report	**50**	Weekly	Grab
Visible Oil Sheen	N/A	N/A	Report (*5)	Report (*5)	Daily	Visual

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING	MONITORING REQUIREMENTS	
*WHOLE EFFLUENT TOXICITY (7 Day Static Renewal) (*6)*	*VALUE*	*MEASUREMENT FREQUENCY (*1)*	*SAMPLE TYPE*
Americamysis bahia	**Report**	**Once/Quarter**	**24-Hr Composite**
Menidia beryllina	**Report**	**Once/Quarter**	**24-Hr Composite**

Footnotes:

***1** When discharge occurs.
***2** For instantaneous grab, sample shall be analyzed within 15 minutes of collection.
***3** The minimum dissolved oxygen limit shall be 3.0 mg/l, with a mean DO of 5.0 mg/l.
***4** In the spring, the minimum dissolved oxygen limit shall be 4.0 mg/l, with a mean DO of 5.0 mg/l. Spring is from March to June.
***5** Record the total number of days where an oil sheen is visible at the outfalls.
***6** Monitoring and reporting requirements begin on the effective date of this permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

3. FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts.
There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks; related residue will not cause toxicity to man, aquatic life, or terrestrial life.

4. SAMPLING LOCATION(S) AND OTHER REQUIREMENTS

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream. The sample point(s) shall be clearly marked by the facility if it is not at the final outfall location. There shall be no flow from any source into the piping system after the sample point and prior to the final outfalls.

B. SCHEDULES OF COMPLIANCE

None

C. MONITORING AND REPORTING

- Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required. (See Part III.D.IV of the permit.)

- Discharge Monitoring Report Form(s) shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

- Reporting periods shall end on the last day of the months March, June, September, and December.

- The first Discharge Monitoring Report(s) shall represent facility operations from the effective date of the permit through the last day of the current reporting period.

- Thereafter, the permittee is required to submit regular quarterly reports as described above and shall submit those reports postmarked no later than the 28th day of the month following each reporting period.

- NO DISCHARGE REPORTING - If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

- If any daily maximum or monthly average value exceeds the effluent limitations specified in Part I. A, the permittee shall report the excursion in accordance with the requirements of Part III. D.

- Any daily maximum or monthly average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I. A shall constitute evidence of violation of such effluent limitation and of this permit.

- The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.

All reports shall be sent both to EPA and the Texas Railroad Commission at the addresses shown in Part III of the permit.

PART II - OTHER CONDITIONS

A. DISCHARGE REPORTING

Should any discharge occur, the discharge shall be sampled within one hour of beginning for the pollutants listed at 40 CFR 122, Appendix D, Tables III and IV, plus pH, hardness, TDS, and TSS and the results submitted to EPA and RRC within 90 days of initiating discharge. Should the discharge continue for more than one day, additional samples and analysis results shall be submitted for each additional day. No more than four complete sets of analytical results are required to be submitted. If practicable for a given discharge, additional samples after the first should be collected at least seven days apart. After four sets of analytical results have been submitted to EPA, this permit provision is no longer required for the term of this permit.

Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

Pollutant	MQL ug/l	Pollutant	MQL ug/l
Antimony, Total	60	Nickel, Total	0.5
Arsenic, Total	0.5	Selenium, Total	5
Beryllium, Total	0.5	Silver, Total	0.5
Cadmium, Total	1	Thallium, Total	0.5
Chromium, Total	10	Zinc, Total	20
Copper, Total	0.5	Cyanide, Total	10
Lead, Total	0.5	Phenols, Total	10
Mercury, Total	0.0005 0.005		

Conventional and Nonconventional Pollutants Required to Be Tested by Existing Dischargers if Expected to be Present

Pollutant	MQL ug/l	Pollutant	MQL ug/l
Bromide		Sulfite	
Chlorine, Total Residual	33	Surfactants	
Color		Aluminum, Total	2.5
Fecal Coliform		Barium, Total	100
Fluoride		Boron, Total	100
Nitrate-Nitrite		Cobalt, Total	50
Nitrogen, Total Organic		Iron, Total	
Oil & Grease		Magnesium	
Phosphorus		Molybdenum, Total	10
Radioactivity		Manganese, Total	
Sulfate		Tin, Total	
Sulfide		Titanium, Total	

B. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II. Results of analyses that are less than the listed MQL may be reported as "non detect" (ND).

C. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, at (214) 665-6595, and concurrently to Railroad Commission of Texas, at (512) 463-6804, within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

D. PERMIT MODIFICATION AND REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the Texas Commission on Environmental Quality (TCEQ) Water Quality Standards for Interstate and Intrastate Streams are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the TCEQ. Should the State adopt a State water quality standard, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard in accordance with 40CFR122.44 (d). Modification of the permit is subject to the provisions of 40CFR124.5.

If a new or revised TMDL is determined for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit.

Additionally, in accordance with 40 CFR Part 122.62 (s) (2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

E. STORM WATER POLLUTION PREVENTION

1. Stormwater has been identified by the applicant/permittee as a component of the discharge through Outfalls 001, 002, 003, and 004. This section applies to all stormwater

discharges from the facility through permitted outfalls. The language below has been included in this permit to control stormwater from the facility subject to NPDES regulation:

The permittee shall prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. The terms and conditions of the SWP3 shall be an enforceable Part of the permit.

2. A visual inspection of the facility shall be conducted and a report made annually as described in Paragraphs E.2.d and E.2.e below. The annual report shall be retained on site and available upon request.

The following conditions shall be included in the SWP3 for this facility.

a. The permittee shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the facility; describe and ensure implementation of practices which will be used to reduce pollutants in storm water discharges from the facility; and assure compliance with the terms and conditions of this permit.

b. The permittee must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s). The permittee must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or amend your SWPPP.

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

c. Where experience indicates a reasonable potential for equipment failure (e.g. a tank overflow or leakage), natural conditions e.g. precipitation, or other circumstances which result in significant amounts of pollutants reaching surface waters, the SWP3 should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

d. The permittee shall maintain for a period of three years a record summarizing the results of the inspection and a certification that the facility is in compliance with the SWP3 and the permit, and identifying any incidents of noncompliance. The summary report should contain, at a minimum, the date and time of inspection, name of inspectors(s), conditions found, and changes to be made to the SWP3.

e. The summary report and the following certification shall be signed and attached to the SWP3 and provided to the Environmental Protection Agency and the Railroad Commission of Texas upon request.

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

Signatory requirements for the certification may be found in Part III, Section D.11 of this permit.

f. The permittee shall make available to the Agency, the Railroad Commission of Texas, and/or the USFWS, upon request, a copy of the SWP3 and any supporting documentation.

3. The following shall be included in the SWP3, if applicable.

a. The permittee shall utilize all reasonable methods to minimize any adverse impact on the drainage system including but not limited to:

- ✓ maintaining adequate road and driveway surfaces;
- ✓ removing debris and accumulated solids from the drainage system; and
- ✓ cleaning up prior to the next storm event, any spill by sweeping, absorbent pads, or other appropriate methods.

b. All spilled product and other spilled wastes shall be immediately cleaned up and disposed of according to all applicable regulations, Spill Prevention and Control (SPC) plans or Spill Prevention Control and Countermeasures (SPCC) plans. Use of detergents, emulsifiers, or dispersants to clean up spilled product is prohibited except where necessary to comply with State or Federal safety regulations (i.e., requirement for non-slippery work surface). In all such cases, initial cleanup shall be done by physical removal and chemical usage shall be minimized.

c. All equipment, parts, dumpsters, trash bins, petroleum products, chemical solvents, detergents, or other materials exposed to stormwater shall be maintained in a manner which prevents contamination of stormwater by pollutants.

d. All waste fuel, lubricants, coolants, solvents, or other fluids used in repair or maintenance of vehicles or equipments shall be recycled or contained for proper disposal. Spills of these materials are to be cleaned up by dry means whenever possible.

e. Stormwater Pollution Prevention Plan must be consistent with the requirements of the current Oil Pollution Prevention regulations.

f. Prior to discharge of uncontaminated stormwater from a secondary containment area, the permittee will conduct a visual inspection of the containment area for a visible sheen, an odor associated within the tanked products, and/or a stain pattern within the contained area that is indicative of a spill or leak into that area. No dewatering of the area is allowed under the condition of this permit, if evidence exists of a spill or leak, unless the discharge will not exceed 50 mg/L TOC, 15 mg/L Oil and Grease, or having a pH less than 6.0 or greater than 9.0 standard units.

g. The permittee shall assure compliance with all applicable regulations promulgated under 40 CFR Part 257. Management practices required under regulations found in this Part shall be referenced in the SWP3.

h. The permittee shall amend the SWP3 whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

i. If the SWP3 proves to be ineffective in achieving the general objectives preventing the release of significant amounts of pollutants to water of the state, then the specific objectives and requirements of the SWP3 shall be subject to modification to incorporate revised SWP3 requirements.

4. The facility shall maintain SWP3 describing how the above limits will be met.

F. WHOLE EFFLUENT TOXICITY TESTING (7DAY CHRONIC NOEC)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S) 001, 002, 003, 004	
REPORTED AS FINAL OUTFALL	001, 002, 003, 004
CRITICAL DILUTION (%)	8%
EFFLUENT DILTION SERIES (%)	3%, 5%, 6%, 8%, 11%
TEST SPECIES AND METHODS	Mysidopsis bahia/ Method 2007.0 (EPA/821/R-02-012 or latest version)
	Menidia beryllina/ Method 2006.0 (EPA-821-R-02-012 or latest version)
SAMPLE TYPE	Defined in PART I

b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution

c. This permit may be reopened to require WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. PERSISTENT LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant toxic effects, are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent). If the initial WET test conducted fails, the permittee will conduct three retests. The purpose of retests is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result. If any valid test demonstrates significant lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

a. Retest

The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant lethal effects at or below the critical dilution. The three additional tests shall be conducted monthly during the next three consecutive months. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with the reporting requirements previously outlined and available upon request from the Agency.

b. Requirement to Initiate a Toxicity Reduction Evaluation

If persistent lethality is demonstrated by failure of one or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Part 6 of this section. The permittee shall notify EPA in writing within 5 days of notification of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may also be required due to a demonstration of intermittent effects at or below the critical dilution, or for failure to perform the required retests.

3. REQUIRED TOXICITY TESTING CONDITIONS

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

Condition/Criteria	*Mysidopsis bahia*	*Menidia beryllina*
# of replicates per concentration	8	4
# of organisms per replicate	5	10
# or organisms per concentration	40	40
# of test concentrations per effluent	5 and a control	5 and a control
Holding time *	36 hours for first use	36 hours for first use
Test Acceptability Criteria	≥80% survival of all control organisms. Average dry weight per surviving organism in control ≥0.2mg.	≥80% survival of all control organisms. Average dry weight per surviving unpreserved organism in the control must be ≥0.5mg when test starts with 7d old larvae, or, ≥0.43mg or greater after no more than 7days if preserved.
Coefficient of Variation **	40% or less, unless significant effects are exhibited.	40% or less, unless significant effects are exhibited.

* If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples and the minimum number of effluent portions are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent, and must meet the holding time between collection and first use of the sample. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

**Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%, or a PMSD value greater than the higher value on the range provided.

a. Statistical Interpretation

The statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in the appropriate method manual listed in Part II or the most recent update thereof.

b. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) Toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) Toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) A synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) The test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);

(C) The permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) The synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

c. Samples and Composites

i. The permittee shall collect two flow-weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect second composite sample for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iii. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first

composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

4. REPORTING

The permittee shall prepare a full report of the results of all tests conducted pursuant to this part in accordance with the Report Preparation Section of the most current publication of the method manual, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and submit them upon the specific request of the Agency. For any test which fails, is considered invalid, or which is terminated early for any reason, the full report must be submitted for agency review.

A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. Additional results are reported under the retest codes below.

The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

Reporting Requirement	**Parameter STORET CODE**	
	Mysidopsis bahia	**Menidia beryllina**
Enter a "1" if the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, otherwise enter a "0".	TLP3E	TLP6B
Report the NOEC value for survival	TOP3E	TOP6B
Report the LOEC value for survival	TXP3E	TXP6B
Enter a "1" if the NOEC for growth or reproduction is less than the critical dilution, otherwise enter a "0".	TWP3E	TWP6B
Report the NOEC value for growth or reproduction	TPP3E	TPP6B
Report the LOEC value for growth	TYP3E	TYP6B
Report the highest (critical dilution or control) Coefficient of Variation	TQP3E	TQP6B
(If required) Retest 1 – Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22418	22415
(If required) Retest 2- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22419	22416

(If required) Retest 3- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	51444	51443

5. TOXICITY REDUCTION EVALUATIONS (TREs)

A TRE is triggered following two test failures (a failure followed by one retest failure).

a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and includes the following:

   i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures' (EPA-600/6-91/003) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity'_ (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

b. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

i. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and

ii. Project Organization (e.g., project staff, project manager, consulting services, etc.).

c. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.

d. The permittee shall submit a quarterly TRE Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:

i. Any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

ii. Any studies/evaluations and results on the treatability of the facility's effluent toxicity; and

iii. Any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution.

A copy of the TRE Activities Report shall also be submitted to the state agency.

e. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

f. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

6. MONITORING FREQUENCY REDUCTION

a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually M.beryllina) and not less than twice per year for the more sensitive test species (usually M.bahia).

b. CERTIFICATION - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria in item 3.a. above. In addition, the permittee must provide a list with each test performed including test initiation date, species, NOECs for lethal and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.

c. FAILURES - If any test fails the survival endpoint at any time during the life of this permit, three monthly retests are required and the monitoring frequency for the affected test species shall be increased to once per quarter until the permit is re-issued. Monthly retesting is not required if the permittee is performing a TRE.

Any monitoring frequency reduction granted applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

APPENDIX A of PART II

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
METALS, RADIOACTIVITY, CYANIDE and CHLORINE			
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thalllium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury *1	0.0005		
	0.005		
DIOXIN			
2,3,7,8-TCDD	0.00001		
VOLATILE COMPOUNDS			
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
ACID COMPOUNDS			
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
	BASE/NEUTRAL		
Acenaphthene	10	2,4-Dinitrotoluene	10
Anthracene	10	1,2-Diphenylhydrazine	20
Benzidine	50	Fluoranthene	10
Benzo(a)anthracene	5	Fluorene	10
Benzo(a)pyrene	5	Hexachlorobenzene	5
3,4-Benzofluoranthene	10	Hexachlorobutadiene	10
Benzo(k)fluoranthene	5	Hexachlorocyclopentadiene	10
Bis(2-chloroethyl)Ether	10	Hexachloroethane	20
Bis(2-chloroisopropyl)Ether	10	Indeno(1,2,3-cd)Pyrene	5
Bis(2-ethylhexyl)Phthalate	10	Isophorone	10
Butyl Benzyl Phthalate	10	Nitrobenzene	10
2-Chloronapthalene	10	n-Nitrosodimethylamine	50
Chrysene	5	n-Nitrosodi-n-Propylamine	20
Dibenzo(a,h)anthracene	5	n-Nitrosodiphenylamine	20
1,2-Dichlorobenzene	10	Pyrene	10
1,3-Dichlorobenzene	10	1,2,4-Trichlorobenzene	10
1,4-Dichlorobenzene	10		
3,3'-Dichlorobenzidine	5		
Diethyl Phthalate	10		
Dimethyl Phthalate	10		
Di-n-Butyl Phthalate	10		
	PESTICIDES AND PCBS		
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MQL's Revised November 1, 2007)

Footnotes:

*1 Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005