



DEPARTMENT ORDER

IN THE MATTER OF

BUCKEYE SOUTH PORTLAND TERMINAL,) MAINE POLLUTANT DISCHARGE
LLC)
S. PORTLAND, CUMBERLAND COUNTY, ME) ELIMINATION SYSTEM PERMIT
BULK FUEL STORAGE FACILITY) AND
#ME0000485) WASTE DISCHARGE LICENSE
#W002653-5S-J-R) **APPROVAL**) **RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §§ 411 – 424-C, *Water Classification Program*, 38 M.R.S. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251 *et seq*, and applicable rules of the Department of Environmental Protection (Department) has considered the application of BUCKEYE SOUTH PORTLAND TERMINAL, LLC (permittee/SPT) with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On November 25, 2024, the Department accepted as complete for processing, a renewal application from SPT for Waste Discharge License (WDL) #W002653-5S-I-R/ Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000485 which was issued on December 16, 2019 for a five-year term, and authorized the permittee to discharge treated tank bottom wastewaters at a daily maximum of 100,000 gallons per day (GPD) and hydrostatic test wastewater at a daily maximum flow rate of 4.6 million gallons per day (MGD) to the Fore River, Class SC, in South Portland, Maine. The Department has determined that outfalls carrying stormwater runoff are covered under the Multi Sector General Permit for Stormwater Associated with an Industrial Activity. Therefore, this permit only authorizes discharges of Hydrostatic Test Waters from Outfall 001C and Tank Bottom Waste Waters from Outfall 001B. See **Attachment A** of this permit for a facility site map.

PERMIT SUMMARY

This permit carries forward all the terms and conditions of the previous permit.

CONCLUSIONS

BASED on the findings summarized in the attached PROPOSED Draft Fact Sheet dated January 23, 2026, and subject to the special conditions that follow, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.
3. The provisions of the State's antidegradation policy, *Classification of Maine Waters*, 38 M.R.S. § 464(4)(F), will be met, in that:
 - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected.
 - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected.
 - (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification.
 - (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and
 - (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in *Conditions of Licenses*, 38 M.R.S. § 414-A(1)(D).

ACTION

Based on the findings and conclusions as stated above, the Department APPROVES the above noted application of BUCKEYE SOUTH PORTLAND TERMINAL, LLC to discharge, a daily maximum of 100,000 GPD of treated tank bottom wastewaters from Outfall #001B and a daily maximum of 4.6 MGD day of hydrostatic test wastewater from Outfall #001C from a bulk fuel storage and transfer facility to the Fore River, Class SC, in South Portland, Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. *Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits,* revised July 1, 2002, copy attached.
2. The attached Special Conditions, including effluent limitations and monitoring requirements.
3. This permit and the authorization to discharge become effective upon the date of signature below and expires at midnight five (5) years from the effective date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the authorization to discharge and the terms and conditions of this permit and all modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act, 5 M.R.S. § 10002 and Rules Concerning the Processing of Applications and Other Administrative Matters, 06-096 CMR Ch. 2(21)(A)* (September 15, 2024)]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS _____ DAY OF _____ 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For Melanie Loyzim, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application November 22, 2024.

Date of application acceptance November 25, 2024.

This Order prepared by Rod Robert, Bureau of Water Quality

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge **tank bottom wastewaters from Outfall #001B (when hydrostatic test wastewater is not being discharged)** to the Fore River at South Portland. Such discharges are limited and must be monitored by the permittee as specified below:

OUTFALL #001B – Tank bottom wastewaters ^(1,)

Effluent Characteristic	Discharge Limitations		Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow (Gallons) ⁽²⁾ <i>[51500]</i>	---	100,000 gal <i>[57]</i>	1/Discharge <i>[01/DS]</i>	Measure <i>[MS]</i>
Total Suspended Solids <i>[00530]</i>	---	50 mg/L <i>[19]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
Oil & Grease <i>[00552]</i>	---	15 mg/L <i>[19]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
PAHs (Single chemical) ⁽³⁾ <i>[38528]</i>	---	Report ug/L <i>[28]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
BTEX ⁽⁴⁾ <i>[49491]</i>	---	Report mg/L <i>[19]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
Whole Effluent Toxicity (WET) ⁽⁵⁾ <u>Acute – NOEL</u> <i>Mysidopsis bahia [TDM3E]</i> (Mysid shrimp)	---	100% <i>[23]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 6 through 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- The permittee is authorized to discharge **hydrostatic test wastewater from Outfall #001C** to the Fore River at South Portland. Such discharges are limited and must be monitored by the permittee as specified below:

OUTFALL #001C – Hydrostatic test wastewater ⁽¹⁾

Effluent Characteristic	Discharge Limitations		Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow ⁽²⁾ <i>[50050]</i>	---	4.6 MGD <i>[03]</i>	1/Discharge <i>[01/DS]</i>	Measure <i>[MS]</i>
Total Suspended Solids <i>[00530]</i>	---	50 mg/L <i>[19]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
Oil & Grease ⁽⁶⁾ <i>[00552]</i>	---	15 mg/L <i>[19]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>
Total Chlorine Residual ⁽⁷⁾ <i>[50060]</i>	---	13 ug/L <i>[28]</i>	1/Discharge <i>[01/DS]</i>	Grab <i>[GR]</i>

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 6 through 9 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES – Tank Bottom Wastewaters and Hydrostatic Wastewaters

Sampling Locations: Discharges from Outfall, #001B and #001C must be sampled independently, prior to co-mingling with any other waste stream(s), and during the first hour of discharge.

Outfall #001B (tank bottom wastewaters) samples for all parameters shall be collected from the clean holding tank prior to discharge directly to the receiving waters or before being commingled with storm water runoff.

Outfall #001C (hydrostatic test wastewaters) samples for all parameters shall be collected from the tank or piping prior to discharge directly to the receiving waters or before being commingled with stormwater runoff.

1. **Sampling** - Any change in sampling location must be approved by the Department in writing. The permittee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (C.F.R.) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 C.F.R. Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for wastewater. Samples that are sent to a POTW pursuant to Waste discharge licenses, 38 M.R.S. § 413 are subject to the provisions and restrictions of Maine Comprehensive and Limited Environmental Laboratory Certification Rules, 10-144 C.M.R. Ch. 263 (amended March 15, 2023). Laboratory facilities that analyze compliance samples in-house are subject to the provisions and restrictions of 10 – 144 C.M.R. Ch. 263. If the permittee monitors any pollutant more frequently than required by the license using test procedures approved under 40 C.F.R. Part 136 or as specified in this license, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report (DMR).

In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the permittee must monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is "sufficiently sensitive" when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term "minimum level" refers either to the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in the following ways: they may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Tank Bottom Wastewater Only – Outfall #001B

After treatment via the granular activated carbon treatment system, the treated tank bottom wastewaters shall be stored in a clean holding tank until all monitoring and testing requirements have been completed and demonstrate that the pollutant levels are within the discharge limitations as specified. The discharge of treated tank bottom wastewater from the clean holding tank meeting all the discharge limits of this permit may bypass the oil/water separator. The treated tank bottom wastewater shall be discharged at or in close proximity to the existing permitted outfall. The discharge of tank bottom wastewaters shall not exceed three continuous days and there shall be a lapse of a minimum of 14 days between tank bottom discharges to prevent any possible chronic effects.

In lieu of treating and holding all the tank bottom wastewaters from a designated tank, the permittee may treat a representative batch consisting of 10% of the entire batch from the designated tank or 10,000 gallons, whichever is less, and store it in a clean holding tank. After all monitoring and testing requirements have been completed and demonstrate that the pollutant levels of the representative batch are within the discharge limitations as specified in Special Condition A (Outfall #001B) of this permit, the treated tank bottom wastewaters in the clean holding tank may then be discharged. The discharge of treated tank bottom wastewater from the clean holding tank meeting all the discharge limits of this permit may bypass the oil/water separator. The remainder of the tank bottom wastewater from the designated tank may be discharged after treatment via the granular activated carbon treatment system without further monitoring and may bypass the oil/water separator. The treated tank bottom wastewater shall be discharged at or near the existing permitted stormwater outfall. The discharge of tank bottom wastewaters shall not exceed three continuous days and there shall be a lapse of a minimum of 14 days between tank bottom discharges to prevent any possible chronic effects.

2. **Flow (Tank Bottom Wastewaters and Hydrostatic Wastewater)** The flow through the oil/water separator shall consist of treated tank bottom wastewaters discharged through Outfall #001B and Hydrostatic Wastewater through Outfall #001C. The direct or indirect discharge of liquids from petroleum product pipelines, transport tanks, vessels or storage tanks through the oil/water separator is not authorized by this permit except as specified for Outfalls #001B and Outfall #001C. No chemical treatment such as dispersants, emulsifiers or surfactants may be added to the oil/water separator or any wastewater discharge stream contributing flow to the separator.

At no time shall the flow through the oil/water separator exceed the design flow of the separator (610 gpm).

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Flow measurement devices or calculated flow estimates via pump curves or tank volumes or other methods must be approved by the Department. Measurement of flow may be suspended upon approval from the Department in the event the permittee limits flow to the separator by installing a permanent constriction to prevent flows from exceeding the design capacity of the separator. The installation, replacement or modification of any flow measurement or constriction device requires prior approval by the Department. For the purposes of this permitting action, utilizing pump curves and run times for measuring flows for Outfall #001B and utilizing the strapping chart (a chart showing amount of material stored versus depth of material in tank) for Outfall #001C for measuring flow are approved by the Department.

Footnotes - Tank Bottom Wastewater Only – Outfall #001B (cont'd)

3. **Polynuclear Aromatic Hydrocarbons (PAHs)** shall be analyzed in accordance with 40 CFR Part 136, Appendix A, EPA Method 625. The highest single PAH of the PAH's listed below shall be reported in the daily maximum column of the DMR.

Acenaphthylene	Acenaphthene	Anthracene
Benzo(B)Fluoranthene	Benzo(K)Fluorantene	Benzo(A)Pyrene
Crysene	Fluoranthene	Fluorene
Indeno(1,2,3-cd)Pyrene	Phenanthrene	Pyrene
Benzo(ghi)perylene	Benzo(A) Anthracene	Dibenzo(A,H)Anthracene
Naphthalene		

4. **BETX** - When discharging tank bottom wastewater which may contain the BETX compounds, the permittee shall monitor for the suspected compounds. BETX shall be analyzed in accordance with EPA's Method 602 and must achieve reporting limits for each compound as prescribed in the Department's WET and Chemical Specific Data Report Form in **Attachment B** of this permit.
5. **Whole Effluent Toxicity (WET)** - Testing shall be conducted on the first discharge event of the calendar year. Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. However, in the case of batch dischargers such as South Portland Terminal, multi-concentration WET testing is waived, and definitive WET testing shall be conducted using 100% effluent collected from tank bottom wastewater that is representative of the discharge.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

Footnotes - Tank Bottom Wastewater Only – Outfall #001B (cont'd)

SPT is prohibited from discharging tank bottom wastewater until WET test results indicate Acute No Observed Effect Level (A-NOEL) at 100% effluent.

A-NOEL is defined as the acute-no observed effect level with survival as the end point. It is noted the Department defines A-NOEL as an IC-10 (inhibition concentration) based on survival in the acute test. WET testing shall be conducted using the mysid shrimp (*Mysidopsis bahia*).

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following U.S.E.P.A. manuals.

Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, (Fifth Edition), October 2002, EPA-821-R-02-012.

The permittee is also required to analyze the effluent for the parameters specified in the “Analytical Chemistry” section on the form in **Attachment B** of this permit every time a screening- or surveillance-level WET test is performed for compliance with this permit.

Footnotes – Hydrostatic Wastewater Only – Outfall #001C

6. **Oil and grease** - Monitoring is not required if the discharge of hydrostatic test water is from tanks and pipes that are clean and certified weldable. The test water is not required to be pretreated through the oil/water separator, provided the test water is municipal water or from some other source which does not contain oil and grease.
7. **Total residual chlorine (TRC)** – Compliance with the daily maximum limitation is based on the U.S. Environmental Protection Agency’s (USEPA) current reportable limit (RL) of 20 ug/L (0.02 mg/L). All analytical test results must be reported to the Department, including results which are detected below the RL. Results reported at or below the RL will be considered to be in compliance with the permit. If the analytical test result is below the RL, the result must be reported as <X where X is the detection level achieved by the laboratory for that test. The Discharge Monitoring Reports will be coded with the RL of 20 ug/L such that detectable results reported at or below 20 ug/L but greater than the daily maximum water quality-based limit established in this permit will not be recorded as violations of the permit.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the usages designated for the classification of the receiving waters.
2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated for the classification of the receiving waters.
3. The permittee must not discharge effluent that imparts color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsuitable for the designated uses and characteristics ascribed to their classification.
4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification or lowers the existing quality of any body of water if the existing quality is higher than the classification.

C. HYDROSTATIC TEST WASTEWATER

Tanks and pipes being hydrostatically tested must be clean of product and all construction debris, including sandblasting grit, prior to testing and discharge through Outfall #001C. The discharge must be dechlorinated if test results indicate that discharged waters will violate permit limits. **The permittee must notify the Department of an intended discharge of hydrostatic test wastewater at least three business days prior to the discharge.**

D. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on November 25, 2024 2) the terms and conditions of this permit; and 3) only from Outfall #001B and Outfall #001C. Discharges of wastewater from any other point source(s) are not authorized under this permit and must be reported in accordance with Standard Condition D (1) (f), *twenty-four-hour reporting*, of this permit.

SPECIAL CONDITIONS

E. MONITORING AND REPORTING

Electronic Reporting

NPDES Electronic Reporting, 40 C.F.R. 127, requires MEPDES permit holders to submit monitoring results obtained during the previous month on an electronic discharge monitoring report to the regulatory agency utilizing the USEPA electronic system.

Electronic DMRs submitted using the USEPA NetDMR system, must be:

1. Submitted by a facility authorized signatory; and
2. Submitted no later than **midnight on the 15th day of the month** following the completed reporting period.

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the Department toxsheet reporting form. An electronic copy of the Toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

F. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants to the system at the time of permit issuance.
2. For the purposes of this section, notice regarding substantial change must include information on:
 - (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
 - (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

SPECIAL CONDITIONS

G. REOPENING OF PERMIT FOR MODIFICATIONS

In accordance with *Conditions of Licenses*, 38 M.R.S. § 414-A(5) and upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded, (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

H. SEVERABILITY

In the event that any provision(s), or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit will remain in full force and effect and will be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE**

FACT SHEET

DATE: **JANUARY 23, 2026**

PERMIT NUMBER: **#ME0000485**

WASTE DISCHARGE LICENSE: **#W002653-5S-J-R**

NAME AND ADDRESS OF APPLICANT:

**BUCKEYE SOUTH PORTLAND TERMINAL, LLC.
170 LINCOLN STREET
SOUTH PORTLAND, ME 04106**

NAME AND ADDRESS WHERE DISCHARGE(S) OCCUR(S):

**SOUTH PORTLAND TERMINAL LLC
170 LINCOLN STREET
SOUTH PORTLAND, ME 04108**

COUNTY: **CUMBERLAND**

RECEIVING WATER CLASSIFICATION: **FORE RIVER, CLASS SC**

COGNIZANT OFFICIAL CONTACT INFORMATION:

**Gianna Aiezza
(518) 453-2203
EMAIL: gaiezza@envirospeceng.com**

1. APPLICATION SUMMARY

Application: On November 25, 2024, the Department accepted as complete for processing, a renewal application from SPT for Waste Discharge License (WDL) #W002653-5S-I-R/ Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0000485 which was issued on December 16, 2019 for a five-year term, and authorized the permittee to discharge treated tank bottom wastewaters at a daily maximum of 100,000 gallons per day (GPD) and hydrostatic test wastewater at a daily maximum flow rate of 4.6 million gallons per day (MGD) to the Fore River, Class SC, in South Portland, Maine. The Department has determined that outfalls carrying stormwater runoff are covered under the Multi Sector General Permit for Stormwater Associated with an Industrial Activity. Therefore, this permit only authorizes discharges of Hydrostatic Test Waters from Outfall 001C and Tank Bottom Waste Waters from Outfall 001B.

2. PERMIT SUMMARY

- a. Terms and Conditions: This permitting action carries forward all the terms and conditions of the previous permit.
- b. History: The most current relevant regulatory actions and or significant events include the following:

October 24, 1997 – The Department issued WDL renewal #W002653-53-B-R to the Mobil Oil Corporation for a five-year term.

August 30, 1999 – The United States Environmental Protection Agency (USEPA) issued a renewal of National Pollution Discharge Elimination System (NPDES) permit #ME0000485 to the Mobil Oil Corporation for a five-year term.

January 12, 2001 – The State of Maine received authorization from the USEPA to administer the NPDES permitting program in Maine. From this date forward, the program has been referred to as the MEPDES permit program, and MEPDES permit #ME0000485 has been utilized for this facility. On March 26, 2011, the USEPA authorized the Department to administer the MEPDES program in Indian territories of the Penobscot Nation and Passamaquoddy Tribe.

December 10, 2003 – The Department issued a permit renewal and transfer of WDL#W002653-5S-D-R /MEPDES /#ME0000485 from Mobil Oil Corporation to ExxonMobil for a five-year term.

April 29, 2009 – The Department issued MEPDES permit/WDL ME0000485/W0002653-5S-E-R for a five-year term.

October 18, 2011 – The Department issued a transfer of WDL/MEPDES #W002653-5S-E-T/#ME0000485 from ExxonMobil Corporation to South Portland Terminal, LLC for a five-year term.

April 10, 2014 – The Department issued MEPDES permit/WDL ME0000485/W0002653-5S-H-R for a five-year term.

March 19, 2019 – SPT submitted a timely and complete application to renew the MEPDES permit for SPT's South Portland facility, in South Portland, Maine. The application was accepted for processing on March 19, 2019, and was assigned WDL #W0002563-5S-I-R / MEPDES #ME0000485.

2. PERMIT SUMMARY(cont'd)

December 16, 2019 – The Department issued MEPDES permit/WDL ME0000485/W0002653-5S-I-R for a five-year term.

November 22, 2024 – SPT submitted a timely and complete application to renew the MEPDES permit for SPT's South Portland facility, in South Portland, Maine. The application was accepted for processing on November 25, 2024, and was assigned WDL #W000485-5S-J-R / MEPDES #ME0002653.

- c. Source Description: The permittee is engaged in the transfer (ship-to-shore), storage and distribution of refined petroleum products such as gasoline, ultra-low sulfur diesel fuel ethanol denatured with gasoline up to 5% and home heating oil. The site encompasses approximately 28 acres with a number of above-ground storage tanks having a gross capacity of approximately 84,000 barrels (35,280,000 gallons). In addition to tankage, there is an extensive above-ground and below-ground network of piping. There is a marine docking facility to transfer product from ships and/or barges to the shore and a loading rack area where product from the storage tanks is transferred to tanker trucks to be distributed to local fuel oil dealers and gasoline stations for distribution to the public.

Each of the storage tanks is enclosed in an unlined area of earthen dikes or concrete walls. The diked areas are designed to contain the contents of the enclosed tanks plus an additional volume to contain any extinguishing chemicals or water and precipitation. The dikes are required by the City of South Portland for safety to prevent product from spilling from one tank area to another or directly into a receiving waterbody, provide temporary containment in the event of a tank failure and isolate tanks in the event of a major fire in a tank. The remainder of the site consists of an office building, a warehouse complex and a tank truck loading rack area.

Hydrostatic test wastewater is municipal water used to test the integrity of the permittee's structural components (tanks, pipes) and is generated several times per year. The tanks are washed and cleaned in preparation for repair and hydrostatic testing, this wash water is tank trucked to a Buckeye South Portland Terminal, LLC-approved facility for product reclamation and wastewater treatment. The permittee's largest tank would discharge approximately 4.5 million gallons of test water over a period of several days. The new pipe assemblies are hydrostatically tested prior to connecting to the existing product piping; therefore, the pipes do not come into contact with product prior to hydrostatic testing. Flows from the piping testing will be held in a portable fractionation ("frak") tank prior to discharge. This permitting action is carrying forward approval of the discharge of hydrostatic testing water from tanks and up to an additional 100,000 gallons of hydrostatic test wastewater from facility piping to Outfall #001C.

The tank bottom wastewater is drawn from the bottoms of the petroleum storage tanks. The tank bottom wastewater consists of condensation, roof and/or roof seal leakage water, and/or water from transport tanks, barges or ships. The tank bottom wastewater also contains incidental spills and storm water runoff.

2. PERMIT SUMMARY (cont'd)

This permit does not require further treatment of the hydrostatic testing wastewater unless dechlorination is required to protect water quality.

The tank bottom wastewater is transferred from the petroleum product storage tank to a frak tank for equalization, incidental free product separation and primary solids separation. The aqueous phase is then filtered for removal of suspended or colloidal materials that may not have settled in the frak tank. The tank bottom wastewater is then directed to a dual- stage granular activated carbon (GAC) train for the removal of dissolved high- and low- molecular weight petroleum hydrocarbon contaminants. The water is then discharged to a clean holding tank for monitoring and eventually discharged directly to the Fore River or via the oil/water separator with the stormwater runoff. It is noted that the permittee has not discharged treated tank bottom wastewater from the South Portland facility since 1994.

Tank bottom wastewater will be shipped by tank truck to a South Portland Terminal, LLC-approved facility for product reclamation and waste treatment. The permittee has chosen to retain the option to treat and discharge tank bottom wastewater at the South Portland facility and authorization to do so is therefore being carried forward in this permitting action.

Both waste streams described above are discharged through a common outfall pipe. The outfall pipe is a steel pipe measuring eight inches in diameter that exits the diked area surrounding Tank #30 and is above the mean low water level. See **Attachment C** of this Fact Sheet for a schematic of the facility.

3. CONDITIONS OF PERMITS

Conditions of licenses, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment, be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S. § 420 and *Surface Waters Toxics Control Program*, 06-096 CMR Ch.530 (effective March 21, 2012), require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR Ch. 584 (effective February 16, 2020), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Classification of estuarine and marine waters, 38 M.R.S. § 469(F) classifies the Fore River as a Class SC waterway. *Standards for classification of estuarine and marine waters*, 38 M.R.S. § 465-B(3) describes the classification standards for Class SC waters as follows.

3. *Class SC waters. Class SC waters shall be the 3rd highest classification.*

A. Class SC waters must be of such quality that they are suitable for recreation in and on the water, fishing, aquaculture, propagation and restricted harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation and as a habitat for fish and other estuarine and marine life.

B. Class SC waters must be of sufficient quality to support all species of fish indigenous to those waters and to maintain the structure and function of the resident biological community. The dissolved oxygen content of Class SC waters may not be less than 70% of saturation. Between April 15th and October 31st, the number of enterococcus bacteria in these waters may not exceed a geometric mean of 14 CFU or MPN per 100 milliliters in any 90-day interval or 94 CFU or MPN per 100 milliliters in more than 10% of the samples in any 90-day interval. The number of total coliform bacteria or other specified indicator organisms in samples representative of the waters in restricted shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program, United States Food and Drug Administration as set forth in its publication "Guide for the Control of Molluscan Shellfish" (2019 revision) or any successor publication.

C. Discharges to Class SC waters may cause some changes to estuarine and marine life provided that the receiving waters are of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.

5. RECEIVING WATER CONDITIONS

The State of Maine 2018/2020/2022 Integrated Water Quality Monitoring and Assessment Report, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists the Fore River Estuary in South Portland as Assessment unit ID , ME010600010402_SC_WI_PE “Category 3”: Estuarine and Marine Waters with Insufficient Data or Information to Determine if Shellfish Harvesting Designated Use is Attained.

The report also lists the Fore River Estuary as “Category 5-A: Estuarine and Marine Waters Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D (TMDL Required).” The Report states that aquatic life and toxics may impair “marine life use support.” The report indicates the causes of the impairment are municipal point sources, combined sewer overflows, stormwater, hazardous waste sites and nonpoint spills of all sizes. The report indicates that a total maximum daily load (TMDL) has not been scheduled at this time and that the TMDL report is listed as a medium priority.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharges from activities associated with bulk petroleum stations and terminal operations must satisfy best conventional technology (BCT) and best available technology (BAT) requirements and must comply with more stringent water quality standards if BCT and BAT requirements are not adequate.

This permit authorizes the discharge of Tank bottom Waste Waters and Hydrostatic Test Wastewater with numeric effluent limitations which are within applicable water quality standards. The effluent parameters for each waste stream are discussed in more detail below. The sections are arranged according to the effluent characteristic(s) being regulated:

- a. Tank Bottom Wastewaters – Outfall #001B - A review of the DMRs submitted to the Department since issuance of the December 16, 2019 permit indicate there was no tank bottom wastewater discharged during this period.

This permit authorizes the permittee to discharge treated tank bottom wastewater directly to the receiving waters without passing through the oil/water separator. The water quality-based limits established were based on a low water dilution factor of 1:1 as the outfall pipe is exposed at mean low water and there is no prohibition (nor does the permittee desire such a prohibition) for discharging at low tide. Limitations and monitoring requirements for this scenario are outlined below and are contained in the table for Outfall #001B in Special Condition A of this permit.

1. Flow: This permitting action is carrying forward the daily maximum flow limit of 100,000 gallons per each discharge event which is the largest quantity of tank bottom wastewaters anticipated to be generated in each calendar quarter.
2. Total Suspended Solids (TSS): This permitting action is carrying forward a daily maximum TSS limitation of 50 mg/L based on a Department BPJ of BPT.
3. Polynuclear Aromatic Hydrocarbons (PAHs): PAHs are known to be ubiquitous in the environment. The primary source of PAHs is the incomplete combustion of organic compounds. These are referred to as “pyrogenic PAHs.” Another source is crude oil and/or its petroleum derivatives; these PAHs are referred to as petrogenic in origin. PAHs will strongly adsorb to suspended particulates and biota. Therefore, the transport of PAHs will be largely determined by the hydrogeologic conditions in the receiving water and its aquatic system. The PAHs which accumulate in the receiving water's bottom sediment are believed to be biodegraded and bio transformed by bottom-dwelling organisms.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

This permitting action carries forward the requirement for the permittee to report the daily maximum concentration of PAH discharged expressed in units of micrograms/liter (ug/L).

Single PAH compounds to be analyzed include:

Acenaphthylene	Acenaphthene	Anthracene
Benzo(B)Fluoranthene	Benzo(K)Fluorantene	Benzo(A)Pyrene
Crysene	Fluoranthene	Fluorene
Indeno(1,2,3-cd)Pyrene	Phenanthrene	Pyrene
Benzo(ghi)perylene	Benzo(A)Anthracene	Dibenzo(A,H)Anthracene
Naphthalene		

The permittee is required under footnote #7 of this permitting action to report the highest concentrations of individual PAH compounds.

4. BETX (Benzene, Ethylbenzene, Toluene, Xylenes): Based on the assumption that hydrocarbons found in gasoline would likely be found in tank bottom wastewaters, the Department determined dissolved gasoline constituents typically remain in oil/water separator effluent at a concentration of 15 ppm. Generally, the higher the solubility of a gasoline constituent in water, the more difficult it is to remove. Three gasoline compounds with the highest solubility are: naphthalene, propylene, and benzene. Propylene and naphthalene, however, are minor constituents of gasoline. In the past, benzene has been selected as the main pollutant of concern in light distillates, such as gasoline, since it existed in light distillates at significant concentrations.

This permitting action carries forward the requirement to report the daily maximum concentrations of benzene, ethylbenzene, toluene, and total xylenes in milligrams/liter (mg/L).

5. Whole Effluent Toxicity (WET): This permitting action is carrying forward an A-NOEL limitation of 100% for WET testing based on 06-096 CMR Ch.530, *Surface Water Toxics Control Program*. The limitation of 100% effluent (undiluted effluent) is specified because of the lack of dilution in the receiving water as the outfall pipe does not have a diffuser and discharges above the low-water mark. The permittee may perform a mixing zone study so that it can be used to provide new information in calculating the acute water quality-based threshold for WET testing. If appropriate, this permit may be reopened per Special Condition G, *Reopening of Permit For Modifications*, to incorporate revised applicable water quality-based thresholds.

6. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

The Department is carrying forward the WET testing frequency of 1/Year and the requirement that the WET test shall be conducted on the first discharge event of the calendar year.

Should test results indicate an observed effect, the permit will be reopened per Special Condition G, *Reopening of Permit For Modifications*, to require additional WET testing and/or the submission of a toxicity reduction evaluation (TRE).

- b. Hydrostatic Test Wastewater - Outfall #001C – A review of the DMRs submitted to the Department since issuance of the December 16, 2019, permit indicates that there have been no hydrostatic test wastewater discharge events during this period.
1. Flow – For each discharge event, this permitting action is establishing a maximum limit of 4.6 million gallons per day which is the sum of the volume of the largest tank onsite and the maximum discharge volume from hydrostatic testing of the new piping system.

This permitting action carries forward the daily maximum limitation of 4.6 MGD from the previous permitting action based on the maximum flow rate the permittee anticipates from this process.

2. Total Suspended Solids (TSS) – This permitting action is carrying forward the TSS daily maximum limit of 50 mg/L that is based on a Department BPJ of limits that were achievable given the tanks and pipes that are hydrostatically tested have been washed and cleaned in preparation for repair and testing.
3. Oil & Grease – This permitting action is carrying forward a daily maximum oil and grease concentration limit of 15 mg/L that is a Department BPJ of limits that are achievable when tanks that are hydrostatically tested have been washed and cleaned in preparation for repair and testing.
4. Total residual chlorine (TRC) – This permitting action is carrying forward a daily maximum TRC limit of 13 ug/L. This limitation is based on USEPA's acute criteria maximum concentration (CMC) of 13 ug/L for marine waters. A chronic limit is not specified because the discharge is not continuous.

Compliance with the daily maximum TRC limitation is based on USEPA's current minimum level (ML) of detection of 20 ug/L (0.02 mg/L).

It is noted the quarterly Discharge Monitoring Reports (DMRs) are coded with the numeric value of 0.02 mg/L such that detectable results reported below the ML will not be considered a violation of the permit.

7. PUBLIC COMMENTS

Public notice of this application was made in the Portland Press Herald on or about November 14, 2024. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR Ch.522 (effective January 12, 2001).

8. DEPARTMENT CONTACTS

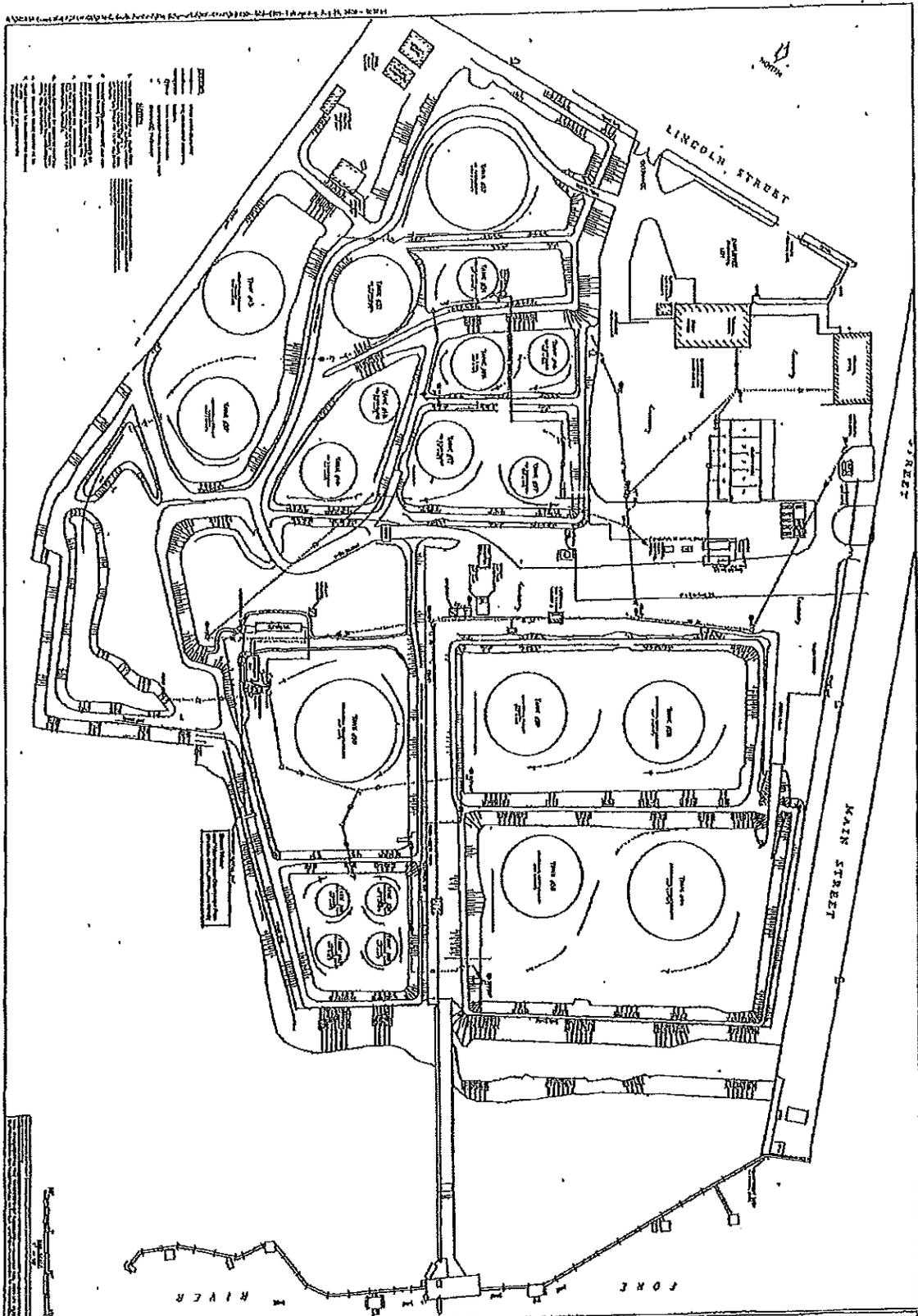
Additional information concerning this permitting action may be obtained from and written comments should be sent to:

Rodney Robert
Division of Water Quality Management
Bureau of Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 680-0576
e-mail: rodney.robert@maine.gov

7. RESPONSE TO COMMENTS

Reserved until the end of the formal thirty-day comment period.

ATTACHMENT A



CHALLENGE PLAN 1/2" = 1'-0" 1/4" = 1'-0" 1/8" = 1'-0" 1/16" = 1'-0" 1/32" = 1'-0" 1/64" = 1'-0" 1/128" = 1'-0" 1/256" = 1'-0" 1/512" = 1'-0" 1/1024" = 1'-0" 1/2048" = 1'-0" 1/4096" = 1'-0" 1/8192" = 1'-0" 1/16384" = 1'-0" 1/32768" = 1'-0" 1/65536" = 1'-0" 1/131072" = 1'-0" 1/262144" = 1'-0" 1/524288" = 1'-0" 1/1048576" = 1'-0" 1/2097152" = 1'-0" 1/4194304" = 1'-0" 1/8388608" = 1'-0" 1/16777216" = 1'-0" 1/33554432" = 1'-0" 1/67108864" = 1'-0" 1/134217728" = 1'-0" 1/268435456" = 1'-0" 1/536870912" = 1'-0" 1/1073741824" = 1'-0" 1/2147483648" = 1'-0" 1/4294967296" = 1'-0" 1/8589934592" = 1'-0" 1/17179869184" = 1'-0" 1/34359738368" = 1'-0" 1/68719476736" = 1'-0" 1/137438953472" = 1'-0" 1/274877906944" = 1'-0" 1/549755813888" = 1'-0" 1/1099511627776" = 1'-0" 1/2199023255552" = 1'-0" 1/4398046511104" = 1'-0" 1/8796093022208" = 1'-0" 1/17592186044416" = 1'-0" 1/35184372088832" = 1'-0" 1/70368744177664" = 1'-0" 1/140737488355328" = 1'-0" 1/281474976710656" = 1'-0" 1/562949953421312" = 1'-0" 1/1125899906842624" = 1'-0" 1/2251799813685248" = 1'-0" 1/4503599627370496" = 1'-0" 1/9007199254740992" = 1'-0" 1/18014398509481984" = 1'-0" 1/36028797018963968" = 1'-0" 1/72057594037927936" = 1'-0" 1/144115188075855872" = 1'-0" 1/288230376151711744" = 1'-0" 1/576460752303423488" = 1'-0" 1/1152921504606846976" = 1'-0" 1/2305843009213693952" = 1'-0" 1/4611686018427387904" = 1'-0" 1/9223372036854775808" = 1'-0" 1/18446744073709551616" = 1'-0" 1/36893488147419103232" = 1'-0" 1/73786976294838206464" = 1'-0" 1/147573952589676412928" = 1'-0" 1/295147905179352825856" = 1'-0" 1/590295810358705651712" = 1'-0" 1/1180591620717411303424" = 1'-0" 1/2361183241434822606848" = 1'-0" 1/4722366482869645213696" = 1'-0" 1/9444732965739290427392" = 1'-0" 1/18889465931478580854784" = 1'-0" 1/37778931862957161709568" = 1'-0" 1/75557863725914323419136" = 1'-0" 1/151115727451828646838272" = 1'-0" 1/302231454903657293676544" = 1'-0" 1/604462909807314587353088" = 1'-0" 1/1208925819614629174706176" = 1'-0" 1/2417851639229258349412352" = 1'-0" 1/4835703278458516698824704" = 1'-0" 1/9671406556917033397649408" = 1'-0" 1/19342813113834066795298816" = 1'-0" 1/38685626227668133590597632" = 1'-0" 1/77371252455336267181195264" = 1'-0" 1/154742504910672534362390528" = 1'-0" 1/309485009821345068724781056" = 1'-0" 1/618970019642690137449562112" = 1'-0" 1/1237940039285380274899124224" = 1'-0" 1/2475880078570760549798248448" = 1'-0" 1/4951760157141521099596496896" = 1'-0" 1/9903520314283042199192993792" = 1'-0" 1/19807040628566084398385987584" = 1'-0" 1/39614081257132168796771975168" = 1'-0" 1/79228162514264337593543950336" = 1'-0" 1/158456325028528675187087900672" = 1'-0" 1/316912650057057350374175801344" = 1'-0" 1/633825300114114700748351602688" = 1'-0" 1/1267650600228229401496703205376" = 1'-0" 1/2535301200456458802993406410752" = 1'-0" 1/5070602400912917605986812821504" = 1'-0" 1/10141204801825835211973625643008" = 1'-0" 1/20282409603651670423947251286016" = 1'-0" 1/40564819207303340847894502572032" = 1'-0" 1/81129638414606681695789005144064" = 1'-0" 1/162259276832213363391578010288128" = 1'-0" 1/324518553664426726783156020576256" = 1'-0" 1/649037107328853453566312041152512" = 1'-0" 1/1298074214657706907132624082305024" = 1'-0" 1/2596148429315413814265248164610048" = 1'-0" 1/5192296858630827628530496329220096" = 1'-0" 1/10384593717261655257060992658440192" = 1'-0" 1/20769187434523310514121985316880384" = 1'-0" 1/41538374869046621028243970633760768" = 1'-0" 1/83076749738093242056487941267521536" = 1'-0" 1/166153499476186484112975882535042672" = 1'-0" 1/332306998952372968225951765070085344" = 1'-0" 1/664613997904745936451903530140170688" = 1'-0" 1/1329227995809491872903807060280341376" = 1'-0" 1/2658455991618983745807614120560682752" = 1'-0" 1/5316911983237967491615228241121365504" = 1'-0" 1/10633823966475934983230456482242731008" = 1'-0" 1/21267647932951869966460912964485462016" = 1'-0" 1/42535295865903739932921825928970924032" = 1'-0" 1/85070591731807479865843651857941848064" = 1'-0" 1/170141183463614959731687303715883696128" = 1'-0" 1/340282366927229919463374607431767392256" = 1'-0" 1/680564733854459838926749214863534784512" = 1'-0" 1/1361129467708919677853498429727069569024" = 1'-0" 1/2722258935417839355706996859454139138048" = 1'-0" 1/5444517870835678711413993718908278276096" = 1'-0" 1/10889035741671357422827987437816556552192" = 1'-0" 1/21778071483342714845655974875633113104384" = 1'-0" 1/43556142966685429691311949751266226208768" = 1'-0" 1/87112285933370859382623899502532452417536" = 1'-0" 1/174224571866741718765247799005064904835136" = 1'-0" 1/348449143733483437530495598010129809670272" = 1'-0" 1/696898287466966875060991196020259619340544" = 1'-0" 1/1393796574933933750121982392040519238681088" = 1'-0" 1/2787593149867867500243964784081038477362176" = 1'-0" 1/5575186299735735000487929568162076954724352" = 1'-0" 1/1115037259947147000097585913624155390944864" = 1'-0" 1/2230074519894294000195171827248310781889728" = 1'-0" 1/4460149039788588000390343654496621563779456" = 1'-0" 1/8920298079577176000780687308993243127558912" = 1'-0" 1/17840596159154352001561374617966486255117824" = 1'-0" 1/35681192318308704003122749235932972510235648" = 1'-0" 1/71362384636617408006245498471865945020471296" = 1'-0" 1/142724769273234816012490996943731890040942592" = 1'-0" 1/285449538546469632024981993887463780081885888" = 1'-0" 1/570899077092939264049963987774927560163771776" = 1'-0" 1/1141798154185878528099927975549855120327543552" = 1'-0" 1/2283596308371757056199855951099710240655087104" = 1'-0" 1/4567192616743514112399711902199420481310174208" = 1'-0" 1/9134385233487028224799423804398840962620348416" = 1'-0" 1/18268770466974056449598847608797681925240696832" = 1'-0" 1/36537540933948112899197695217595363850481393664" = 1'-0" 1/73075081867896225798395390435190727700962787328" = 1'-0" 1/146150163735792451596790780870381454001925574656" = 1'-0" 1/292300327471584903193581561740762908003851149312" = 1'-0" 1/584600654943169806387163123481525816007702298624" = 1'-0" 1/1169201309886339612774326246963051630015404597248" = 1'-0" 1/2338402619772679225548652493926103260030809194496" = 1'-0" 1/4676805239545358451097304987852206520061618388992" = 1'-0" 1/9353610479090716902194609975704413040123236777984" = 1'-0" 1/18707220958181433804389219951408826080246473555968" = 1'-0" 1/37414441916362867608778439902817652160492947111936" = 1'-0" 1/74828883832725735217556879805635304320985894223872" = 1'-0" 1/149657767665451470435113759611270608641971788447744" = 1'-0" 1/299315535330902940870227519222541217283943576895488" = 1'-0" 1/598631070661805881740455038445082434567887153790976" = 1'-0" 1/1197262141323611763480910076890164869135774307581952" = 1'-0" 1/2394524282647223526961820153780329738271548615163904" = 1'-0" 1/4789048565294447053923640307560659476543097230327808" = 1'-0" 1/9578097130588894107847280615121318953086194460655616" = 1'-0" 1/19156194261177788215694561230242637906172389121311232" = 1'-0" 1/38312388522355576431389122460485275812344778242622464" = 1'-0" 1/766247770447111528627782449209705516246895548852448" = 1'-0" 1/1532495540894223057255564898419411032493791097704896" = 1'-0" 1/3064991081788446114511129796838822064987582195409792" = 1'-0" 1/6129982163576892229022259593677644129975164390819584" = 1'-0" 1/12259964327153784458044519187355288259951328781639168" = 1'-0" 1/24519928654307568916089038374710576519902657563278336" = 1'-0" 1/49039857308615137832178076749421153039805315126556672" = 1'-0" 1/98079714617230275664356153498842306079610630253113344" = 1'-0" 1/19615942923446055132871230699768461215922126050622688" = 1'-0" 1/39231885846892110265742461399536922431844252101245376" = 1'-0" 1/78463771693784220531484922799073844863688504202490752" = 1'-0" 1/156927543387568441062969845598147689727377008404981504" = 1'-0" 1/313855086775136882125939691196295379454754016809963008" = 1'-0" 1/627710173550273764251879382392590758909508033619926016" = 1'-0" 1/1255420347100547528503758764785181517819016067239852032" = 1'-0" 1/2510840694201095057007517529570363035638032134479704064" = 1'-0" 1/5021681388402190114015035059140726071276064268959408128" = 1'-0" 1/10043362776804380228030070118281452142552128537918816" = 1'-0" 1/20086725553608760456060140236562904285104256759837632" = 1'-0" 1/40173451107217520912120280473125808570208513519675264" = 1'-0" 1/80346902214435041824240560946251615140417027039350528" = 1'-0" 1/160693804428870083648481121892512230280834054078701152" = 1'-0" 1/321387608857740167296962243785024460561668108157402304" = 1'-0" 1/642775217715480334593924487570049121123336216314804608" = 1'-0" 1/1285550435430960669187848975140098242246672432629612224" = 1'-0" 1/2571100870861921338375697950280196484493344865259224448" = 1'-0" 1/5142201741723842676751395900560392968986689730518448896" = 1'-0" 1/10284403483447685353502791801120785937973379461036897792" = 1'-0" 1/20568806966895370707005583602241571875946758922073795584" = 1'-0" 1/41137613933790741414011167204483143751893517844147591168" = 1'-0" 1/82275227867581482828022334408966287503787035688295182336" = 1'-0" 1/164550455735162965656044668817932575007574071376590364672" = 1'-0" 1/329100911470325931312089337635865150015148142753180729344" = 1'-0" 1/658201822940651862624178675271730300030296285506361456896" = 1'-0" 1/1316403645881303725248357350543460600060592571012722917792" = 1'-0" 1/2632807291762607450496714701086921200121185142025445435584" = 1'-0" 1/526561458352521490099342940217384240024237028405089087168" = 1'-0" 1/1053122916705042980198685880434768480048474056810178174336" = 1'-0" 1/2106245833410085960397371760869536960096948113620356348672" = 1'-0" 1/4212491666820171920794743521739073920193896227240712697344" = 1'-0" 1/8424983333640343841589487043478147840387792454481425394688" = 1'-0" 1/16849966673280687683178974086956295680775584908962850791376" = 1'-0" 1/33699933346561375366357948173912591361551169817925701582752" = 1'-0" 1/67399866693122750732715896347825182723102339635851403165504" = 1'-0" 1/134799733386245501465431786695653665446204679271702806331008" = 1'-0" 1/269599466772491002930863573391307330892409358543405612662016" = 1'-0" 1/539198933544982005861727146782614661784818717086811233224032" = 1'-0" 1/107839786708996401172345429356522932356963743417362246444864" = 1'-0" 1/215679573417992802344690858713045864713927486834724492929728" = 1'-0" 1/431359146835985604689381717426091729427854973669448985559456" = 1'-0" 1/862718293671971209378763434852183458855709947338897971118912" = 1'-0" 1/1725436587343942418757526869704366917711419894677795942237824" = 1'-0" 1/3450873174687884837515053739408733835422839789355591884475648" = 1'-0" 1/6901746349375769675030107478817467670845679578711183768951296" = 1'-0" 1/13803492698751539350060214957634935341691359157422367537902592" = 1'-0" 1/27606985397303078700120429915269870683382718314844735075805184" = 1'-0" 1/55213970794606157400240859830539741366765366629689470151610368" = 1'-0" 1/110427941589212314800481719661079487333530732519378940303220736" = 1'-0" 1/220855883178424629600963439322158974667061465038757880606441472" = 1'-0" 1/441711766356849259201926878644317949334122930077515761212882944" = 1'-0" 1/883423532713698518403853757288635898668245860155031522425765888" = 1'-0" 1/1766847065427397036807707514573271973336491720310063044851531776" = 1'-0" 1/3533694130854794073615415029146543866728983440620126089703063552" = 1'-0" 1/706738826170958814723083005829308773345796688124025217940612704" = 1'-0" 1/1413477652341917629446166011646177546691593376248050435811225408" = 1'-0" 1/2826955304683835258892332023292355093383186752496100871622450816" = 1'-0" 1/5653910609367670517784664046584710186766373504992201743244901632" = 1'-0" 1/11307821218735341035569328093169420373532747009984403486489803264" = 1'-0"
