

**Maine Department of Environmental Protection (DEP or Department)
Response to Comments on the Proposed Air Emission License Amendment
A-179-71-R-M for Sprague Operating Resources LLC**

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RESPONSE TO COMMENTS

Commenters:

Jason Littlefield – Sprague Operating Resources LLC (Sprague)

Summary of Comments and Department Responses:

1. Comment: Note on #6 Fuel Oil Storage.

Sprague requests a note be added to Section I.D.1.b clarifying that #6 fuel oil is not currently stored in any of the facility’s heated bulk storage tanks.

Response: The Department agrees and has added clarifying language to the license amendment.

2. Comment: Routing Only Active Tanks to the Carbon System.

Sprague requests the wording of Section I.C.1 of the license be revised to indicate that only active licensed heated tanks be routed to a Carbon System. Sprague would route such tanks (i.e., Tank 7, which is currently empty and not heated) to a Carbon System prior to activation (i.e., filling with product and heated).

Response: The Department agrees and has added clarifying language to the license amendment.

3. Comment: Initial Testing Deadline.

Sections II.C.1 and Specific Condition 21.F.1.a require initial testing of the heated storage tanks to occur no later than November 1, 2021. Sprague proposes that initial testing be performed no later than 180 days after the associated Carbon System(s) installation. There are several logistical issues that necessitate this change:

- The U.S. Environmental Protection Agency (EPA) approved Sprague’s Carbon System Design Plan on April 27, 2021, and based on that approval date, the date which the Carbon System must be online is October 27, 2021. Upon EPA’s

approval of the Carbon System Design Plan, Sprague ordered the equipment, which will take a considerable amount of time to fabricate and deliver. While Sprague is confident in meeting the October 27, 2021 deadline for installing the Carbon Systems, Sprague expects there to be little time between the installation and the deadline. In order to allow for an appropriate “shakedown” period for the Carbon System, Sprague requests that the deadline to perform initial testing be delayed.

- Typically, the asphalt season ends in November/December, as asphalt customers are not able to continue paving projects due to weather conditions. Asphalt season resumes in the spring, generally sometime in/near April. When not in season, the asphalt tanks are no longer heated to the degree that they are from April through October, such that emissions are not unnecessarily generated by heating the tanks. Conducting emissions testing outside of the asphalt season would result in unrepresentative test results due to the lower tank temperatures, or excess emissions resulting from heating the tanks when they would otherwise not be.
- Allowing for 180 days from the commencement of Carbon System operation to conduct testing will provide the necessary time for both a shakedown period of the Carbon System and for the tanks to be unheated during the asphalt off-season.

Response: The Department recognizes the assessment of emissions when they are most likely to be representative of normal maximum operation will require testing be performed during warmer months when the tanks are actively in use. Therefore, the license amendment has been revised to set the deadline for emissions testing as no later than 180 days from the startup of the first Carbon System.

4. Comment: Testing Working Losses.

Sprague requests that the requirement to conduct working loss emission testing [in Section II.C.1 and Specific Condition 21.F.1] be removed from the license. Sprague instead proposes that, similar to truck loading, emissions from vessel loading operations be calculated using emission factors developed from the emissions testing program at Sprague’s Searsport Terminal from 2013. These emission factors are representative of operations in South Portland. Similar to conducting emission testing on the asphalt tanks, there are a variety of reasons that testing for working losses from asphalt storage tanks is challenging, and should not be required when a representative emission factor is available:

- The seasonality of asphalt storage means that it is likely that an asphalt delivery would not occur before the tanks are no longer heated for the season.
- Asphalt deliveries can be sporadic and infrequent. For example, during 2020, Sprague only received four vessels containing asphalt, one vessel each in March, May, June, and August. During the March vessel transfer, the storage tank receiving the asphalt was maintained at a “winter fill” temperature, which is far less than storage temperatures during asphalt season. Thus, any off-season vessel transfer activities would be inappropriate for testing.

- Additionally, Sprague is not the owner of the asphalt products and has little control over when asphalt vessels are scheduled. Attempting to select a testing date well enough in advance to ensure that the testing contractor and DEP can be present will be difficult.

Response: The Department declines to make the requested changes to the license amendment. The Department is requiring testing of both working losses and breathing losses in the proposed license amendment because the installation of the Carbon System on the storage tanks will likely change the emission and flow characteristics of the storage tanks such that both the testing conducted by Eastmount in 2013 and AP-42 emission estimation methods will no longer be representative of working or breathing losses from these tanks.

5. Comment: Monitoring Tank Temperature.

Sprague requests that the requirement to monitor and record liquid temperature of each in-service heated bulk storage tank [in Section II.C.1 and Specific Condition 21.H.1] be revised to daily rather than continuously (with hourly averaging). The tank temperature fluctuations on an hourly basis are expected to be small and do not add value from an emission estimation perspective.

Response: The Department declines to make the requested changes to the license amendment. In its research conducted in completing the study for the Maine Legislature regarding emissions from above ground petroleum storage tanks, the Department has determined that changes in the liquid temperature of a product being stored in a heated tank can have a significant effect on emissions. The Department has determined that daily recording of the liquid temperature for a heated storage tank does not provide enough data to demonstrate that a constant temperature is being maintained throughout the day, which is important in minimizing emissions from heated petroleum storage tanks.

6. Comment: Testing Locations.

Sprague requests that emissions testing [in Section II.C.1 and Specific Condition 21.F.1.c] only be conducted upstream from the Carbon System. The Carbon Systems are being installed as odor control devices pursuant to the EPA Consent Decree, thus the results from the downstream testing will not be used for any purpose and any such testing would be unnecessary.

Response: The Department declines to make the requested changes to the license amendment. In its recent report to the Maine Legislature regarding emissions from above ground petroleum storage tanks, the Department committed to studying the emission reduction potential of the odor control equipment required by EPA's consent decrees. The collection of emissions data both upstream and downstream of the Carbon System is being required pursuant to Standard Condition (15) of the facility's air emission license.

7. Comment: Emission Factor Units of Measure.

Sprague will be required to keep records of the hours that the heated bulk storage tanks are spent being filled in order to calculate the emissions from the tanks during filling operations [Section II.D.2 and Specific Condition 21.G.2]. It is suggested that this requirement be modified in order to allow for a “mass per volume filled” emission factor (i.e., pounds per thousand gallons) instead of a “mass per duration” emission factor (i.e., pounds per hour). Vessel discharge rates can vary depending on a variety of conditions, and the use of a “mass per duration” emission factor that was developed during an emission testing program may be inappropriate for use during tank filling operations that are with different tank filling rates (either increased or decreased). Typically, tank truck loading emissions are based on a “mass per volume filled” as the primary emissions mechanism for tank truck filling is the displacement of a volume of vapors that are equivalent to the volume of liquid product entering the tank truck. The emissions mechanism for a large storage tank is the same – because the tank is being filled, the tank is not experiencing a “breathing” effect, but rather is constantly expelling vapors displaced by the liquid entering the tank for the duration of the filling operations.

Suggested replacement language for [Section] II.D.2 is as follows: “Hours the heated bulk storage tanks spend being filled (i.e., experiencing working losses) and the volume of product entering the tank.” This language would still require the hours of tank filling to be recorded, but would allow for an alternative method of calculating emissions.

Response: The Department agrees and has added the requested language to the license amendment.