

ENGINEERING EVALUATION REPORT
SFPP, L.P.
PLANT NUMBER 4022
APPLICATION NUMBER 5509

BACKGROUND

SFPP, L.P. has been operating a pipeline surge system, S-40, consisting of three surge vessels at the terminal in Concord.

This system is used to service storage tanks rather than to store product. From storage tanks product is pumped to the main pipeline via the surge vessels. The vessels are vented to the vapor recovery system via a saturator and a vapor holding tank to facilitate the transition from one batch of product in one storage tank to another batch in another storage tank without shutting down the mainline pumps. During normal operation no surge vessel is vented to vapor recovery system. The venting takes place only when there is a switch between storage tanks.

This source is currently subject to the permit condition ID# 15574. Item 1 of the condition limits the switchover of storage tanks not to exceed 30 per day. The applicant wants to change it to maximum of 45 switchover per day, and on an annual average basis, the daily number of switchover will not exceed 30. Annual VOC emissions will not change due to the proposed change in condition, however daily emissions will increase but will not exceed 10 lb/day.

The application covers the following source:

S-40 Pipeline Surge System, consisting of 3 surge vessels (4884 gallon each)

EMISSION CALCULATIONS

The following method of calculating emissions was used when the current permit condition was written (Application #2732 and Title V permit).

Basis:

1. Maximum 30/45 switchover per day
2. Vapor recovery and destruction efficiency of 99.8% (existing permit condition ID# 12102)
3. 15% gasoline saturated vapors (the vapor saturator tank is set at 15% which is above the upper explosive limit of 8%)

Gasoline vapor volume displaced
= (4884 gallons)(0.1337 cu.ft./gallon)(30 switchover/day)(15%)
= 2938.5 cu.ft./day

VOC max. daily emissions = (2938.5 cu.ft./day)(lb-mole/379 cu.ft.)(66 lb/lb-mole)

(1-0.998)
= 1.023 lb/day @30 switchover per day
= 1.535 lb/day @45 switchover per day

VOC annual emissions = 0.1867 tpy @30 annual avg. switchover per day and
365 days/yr

TOXIC RISK SCREENING ANALYSIS

Toxic risk screening analysis is not required because Benzene emissions will not increase due to the amendment of permit condition.

PLANT CUMULATIVE EMISSION INCREASE

POC: 0.0 tpy

MONITORING ANALYSIS

To ensure that the facility complies with the new annual switchover limit, a condition has been added requiring that the owner/operator calculates the annual switchovers on a daily basis.

STATEMENT OF COMPLIANCE

The surge system complies with the requirements of Regulation 8 Rule 2 (8-2-301, Miscellaneous Operations).

The project is considered to be ministerial under the District's proposed CEQA Regulation 2-1-311 (PHBK chapter 11.9), and therefore is not subject to CEQA review.

The project is over 1000 feet from the nearest school, and therefore is not subject to the public notice requirements of Regulation 2-1-412.

BACT and offset requirements are not triggered.

PSD, NSPS, and NESHAPS do not apply.

PERMIT CONDITIONS

The permit condition ID # 15574 is revised.

RECOMMENDATIONS

It is recommended that SFPP, L.P. shall be issued a change of permit condition letter, and Title V permit with minor revisions.

EXEMPTIONS: None

BY: _____
Dharam Singh, AQE II

CONDITION # 15574

For S40, Pipeline surge system

(Revised: Application #2732)

1. This source shall not exceed 30 switchover of storage tanks per day.
(basis: cumulative increase)
2. The surge system shall be abated by the vapor burner, A1, during all venting operations. (basis: cumulative increase)
3. Only materials with true vapor pressure not greater than 11.0 psia at 70 degree F shall be pumped through S40. (basis: cumulative increase)
4. In order to demonstrate compliance with the above conditions, the owner/operator of S40 shall maintain the following records in a District approved log. These records shall be kept on site and be made available for District inspection for a period of at least five years from the date that the record was made:
 - a. Daily switchover of storage tanks.
(basis: record keeping)

CONDITION # 15574

For S40, Pipeline surge system

(Revised: Application #2732, Application #5509)

1. The owner/operator of S-40 shall not exceed 30 switchovers of storage tanks per day on an annual average basis (10,950 switchover/consecutive 365 day period), and a maximum of 45 switchover on any single day.
(basis: cumulative increase)
2. The owner/operator of S-40 shall abate the surge system by the vapor burner, A1, during all venting operations. (basis: cumulative increase)
3. The owner/operator shall pump materials, only with true vapor pressure not greater than 11.0 psia at 70 degree F through S40. (basis: cumulative increase)
4. In order to demonstrate compliance with the above conditions, the owner/operator of S40 shall maintain the following records in a District approved log. These records shall be kept on site and be made available for District inspection for a period of at least five years from the date that the record was made:
 - a. Daily switchover of storage tanks .
 - b. The daily switchover shall be totaled every 365 consecutive day period.
(basis: Regulation 2-6-501, cumulative increase)