

Purpose

A Staff Report dated March 6, 2017, was developed in order to set forth the applicable requirements and factual basis for the Draft ROP terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the Draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the Draft ROP resulting from these pertinent comments.

General Information

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Summary of Pertinent Comments

EPA COMMENTS:

EPA Comment 1:

FGFACILITY: This flexible group includes a blanket VOC limit of 225 tons per year (12-month rolling average), an HAP Facility-wide emissions limit of 9.0 tons per year per individual HAP (12-month rolling average), and an aggregate HAP limit of 22.5 tons per year (12-month rolling average). The Draft permit does not appear to address all the emission units at the Facility; specifically it does not appear to include emissions from EUBOILER #1, EUBOILER#2, EUHWBOILERS, or EUAHUS. Please note that though these units at the Facility may have been exempt devices pursuant to Michigan Rule 212(4), these units do emit VOC and HAPs. As such, these emissions must be accounted for in the source-wide potential to emit (PTE) calculations when determining major source status. For further information, see Cash Creek Generation, LLC, Title V petition response Order No. IV-2010-4 June 22, 2012; Hu Honua Bioenergy Facility Title V petition response Order No. IX-2011-1, February 7, 2014; and Yuhuang Chemical Inc. Methanol Plant Title V petition response Order No. VI-2015-03, August 31, 2016.

AQD Response 1:

The maximum heat input capacity of all exempt natural gas fired units at the Facility is 77.64 MMBtu/hour. The calculated PTE for VOC, individual and aggregate HAPs based on a fuel throughput of 648 MMCF natural gas/year using AP-42 emission factors is as follows: VOC (1.7 tons/year or 0.8% of Facility-wide VOC limit), highest individual HAP (hexane @ 0.6 tons/year or 6.7% of the Facility-wide individual HAP limit), and aggregate HAPs (0.61 tons/year or 2.7% of the Facility-wide aggregate HAP limit). The Facility includes emissions from their exempt natural gas fired units in their VOC and HAP emission calculations for FGFACILITY. The PTE calculation demonstrates that the VOC and HAP emission contributions from the exempt units is minimal and does not need to be specifically addressed in flexible group FGFACILITY of the Draft ROP.

EPA Comment 2:

Draft ROP: Throughout the permit, the permittee is required to maintain total VOC emission calculations determining the monthly emissions and the annual emission rate in tons per 12-month rolling time period. However, the permit does not specify how these calculations are to be performed. To ensure these limits are enforceable as a practical matter, please specify how the emissions shall be determined or measured for all VOC emitting units. In particular, please address all calculation methodologies, including how fugitive emissions should be estimated and how to account for control efficiencies in the calculations. See the above referenced Title V permit petition responses for more information.

AQD Response 2:

The VOC emissions at the emission unit level are based on mass balance calculations on a monthly and 12-month rolling time period basis. The Facility's total VOC calculations also account for any fugitive VOC emissions based on required machine oil VOC evaporative loss testing conducted on an annual basis and as appropriate for emission units with thermal oxidizer controls, testing that is required to determine VOC destruction efficiency, and VOC emission rate from the control equipment. The oven degreaser exhaust stream is similar across all manufacturing areas and the thermal oxidizer control design is also similar across all manufacturing areas.

EPA Comment 3:

EU-CONDMF41 and EU-CONDGIC2: Please revise the various lb/1000 lb exhaust gas and pound/hour limits in the emission table to ensure that these limits are enforceable as a practical matter by replacing the references to "test protocol" with the averaging period, and any other operating scenario information necessary for determining compliance with each limit.

AQD Response 3:

For particulate matter emission limits listed in EU-CONDMF41 and EU-CONDGIC2, the time period/operating scenario column for lb/1000 lb emission limits is being changed from test protocol to an instantaneous limit in the Draft ROP. The time period/operating scenario for hourly particulate matter emission limits is being changed from test protocol to an hourly limit in the Draft ROP.

EPA Comment 4:

EU-CONDGIC2 and EU-CONDMF41 (Condition IV.2): The permittee is required to operate the cartridge dust filter system in accordance with an approved Malfunction Abatement Plan (MAP). Because the permit relies upon the MAP as a compliance demonstration method for the permit's PM limits, please consider including specific elements from the MAP in the permit as necessary to assure compliance in accordance with 40 CFR §70.6(c)(1).

AQD Response 4:

The Facility has developed and implemented a MAP dated May 31, 2016, for all thermal oxidizers and cartridge filter dust collection systems in use at the Facility. The MAP is publicly available with the ROP Renewal application found on the MDEQ/AQD website. The AQD has reviewed and approved this MAP. If specific elements were to be included in the ROP and the MAP required revisions at a future date, the Facility would have to submit an ROP modification application to make the change in the ROP. The AQD considers the MAP to be a free standing document that should not be incorporated in whole or in part into the ROP in order to allow the Facility flexibility to submit plan revisions to the AQD for review and approval without going through a more formal and time consuming process to incorporate future revisions into the ROP.

EPA Comment 5:

FG-MACT ZZZZ≤500HP: It appears that the origin and authority for the conditions may inadvertently refer to the major source requirements, and may need to be updated to cite to the area source requirements (i.e., on Page 82, Condition III.d, cites to 40 CFR 63.6640(f)(3) when it should cite to 40 CFR 63.6640(f)(4)).

AQD Response 5:

The underlying applicable requirement for Condition III.d of FG-MACT ZZZZ≤500HP has been changed from 40 CFR 63.6640(f)(3) to 40 CFR 63.6640(f)(4).

EPA Comment 6:

Draft ROP: Throughout the permit when testing is required to verify the VOC destruction efficiency and VOC emission rate for a thermal oxidizer, the option is provided to instead test a “representative” thermal oxidizer. This testing is required once every five years and these conditions do not appear to specify a test method. Please identify the specific test method to be used in accordance with 40 CFR §70.6(c)(1). Additionally, please include information in the Staff Report that verifies these units are indeed representative (i.e., the gas stream or the age of the thermal oxidizer units is similar). In accordance with the 40 CFR §70.6(c)(1) monitoring provisions, the USEPA also recommends that these conditions include a requirement that the permittee test all representative units in succession until all representative units have been tested, unless the AQD district supervisor determines there is cause for a specific unit to be retested earlier in the cycle.

AQD Response 6:

The oven degreaser exhaust stream is similar across all manufacturing areas and the thermal oxidizer control design is also similar across all manufacturing areas. The AQD does not typically allow a re-test of the same thermal oxidizer unit unless there is just cause for that specific thermal oxidizer control to be re-tested. The AQD will consider the appropriateness of which thermal oxidizer unit shall be tested for each manufacturing area by reviewing future test plan submittals that are to be approved in accordance with MDEQ requirements.

Compliance with the 12-month rolling average VOC emission limits in Condition I.1 of the applicable emission unit table is based on a combination of mass balance calculations (VI.3), annual fugitive oil loss testing (V.2), periodic testing of the thermal oxidizer for VOC destruction efficiency (DE), VOC emission rate (V.1), and is not based solely on a “Test Protocol.” The thermal oxidizer VOC DE and VOC emission rate testing is necessary to demonstrate compliance with the design/equipment parameters in Condition IV.1, not I.1. The Facility historically has used Method 25A in their test plan to demonstrate compliance with the design/equipment parameter limitations for their thermal oxidizer. However, the AQD believes it is not necessary to add specific test protocol language into each EU table that has a thermal oxidizer since compliance with the VOC emission limit in Condition I.1 cannot be determined solely on the VOC DE and VOC emission rate testing of the control device.

Changes to the March 6, 2017 Draft ROP

EU-CONDMF41: On page 29, the Time Period/Operating Scenario for Condition Nos. I.2 and I.5 were changed from “test protocol” to “instantaneous.” For Condition Nos. I.3, I.4, I.6, and I.7, the Time Period/Operating Scenario were changed from “test protocol” to “hourly.”

EU-CONDGIC2: On page 38, the Time Period/Operating Scenario for Condition Nos. I.2 and I.5 were changed from “test protocol” to “instantaneous.” For Condition Nos. I.3, I.4, I.6, and I.7, the Time Period/Operating Scenario were changed from “test protocol” to “hourly.”

FG-MACT-ZZZZ≤500HP: On page 82, the underlying applicable requirement for Condition III.3.d has been changed from 40 CFR 63.6640(f)(3) to 40 CFR 63.6640(f)(4).

