

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF AIR QUALITY**

**COMMENT AND RESPONSE DOCUMENT (FOR COMPANY COMMENTS)**

**DRAFT PLAN APPROVALS**

**SUNOCO PARTNERS MARKETING & TERMINALS, L.P.  
MARCUS HOOK  
PLAN APPROVAL NOS. 23-0119E (REVISED) & 23-0119J**

**February 5, 2021**

**Commentator:** Edward G. Human, Senior Director – Marcus Hook Operations, Sunoco Partners Marketing & Terminals, L.P. (SPMT).

The Department of Environmental Protection (DEP) has prepared these responses to SPMT’s comments on the draft Plan Approvals (Nos. 23-0119E [revised] and 23-0119J) and associated technical review memos for its natural gas liquids (NGLs) processing, storage, and distribution facility located at the Marcus Hook Industrial Complex (MHIC) in Marcus Hook Borough, Delaware County (hereinafter referred to as “the facility”).<sup>1</sup> The comments and responses are consistent with the section designations and condition numbering of the draft Plan Approvals.

DEP published notice of the public comment period in the *Pennsylvania Bulletin* on February 29, 2020. SPMT published notice of the public comment period in the *Delaware County Daily Times* on March 4–6, 2020. DEP intended to hold a public hearing on the draft Plan Approvals on April 2, 2020, at the Mary M. Campbell Marcus Hook Public Library, 1015 Green Street, Marcus Hook, PA 19061. However, following the issuance of stay-at-home orders from Governor Tom Wolf to minimize the spread of COVID-19 within the Commonwealth, DEP canceled the public hearing. Nonetheless, pursuant to 25 Pa. Code § 127.49(c), DEP maintained the public comment period open through 10 days after the scheduled public hearing date.

### **Comments on Draft Plan Approval No. 23-0119E (Revised)**

#### **1. Sections A (Plan Approval Inventory List) and D (under Source IDs C01 and C02):**

**Comment:** SPMT states that the throughput values indicated for the West Cold Flare and East Cold Flare only include pilot and purge gas flows, and do not include sweep gas flows.

**Response:** DEP concurs and has removed the reference to sweep gas from the throughput listings.

#### **2. Condition # 002, Section C:**

**Comment:** SPMT requests that the values indicated for the amounts of nitrogen [NO<sub>x</sub>] and volatile organic compound [VOC] emission reduction credits (ERCs) required for the single aggregated project be revised to reflect any changes in the New Source Review (NSR) analysis for Plan Approval No. 23-0119E (revised) prior to final issuance. In addition, SPMT states that it “does not currently have the required NO<sub>x</sub> ERCs and needs sufficient time to acquire the credits from a third party.” Therefore, SPMT requests that DEP change the deadline for surrendering the required ERCs to DEP to 180 days after the issuance date of the Plan Approval.

**Response:** DEP concurs and has revised the values of the NO<sub>x</sub> ERCs and VOC ERCs to reflect all such changes in the NSR analysis and has changed the deadline for surrendering the required ERCs as requested.

#### **3. Condition # 024(r), Section D (under Source ID 103):**

**Comment:** SPMT requests that DEP change the wording of the source description for the railcar loading rack to be the same as that in Title V Operating Permit (TVOP) No. 23-00119.

**Response:** DEP concurs, except that it has added SPMT’s designation for the rail rack to the source description (i.e., “The 15-2B rail loading and unloading rack for propane, butane, and natural gasoline”).

#### **4. Condition # 015, Section D (under Source ID 190):**

**Comment:** SPMT contends that “Tank 609 was not modified as a result of the [single] aggregated project and, therefore, is not subject to the [Lowest Achievable Emission Rate] LAER requirement to install a rim-mounted secondary seal.”

---

<sup>1</sup> The public’s and U.S. Environmental Protection Agency’s (EPA’s) comments, along with DEP’s responses, appear in a separate Comment and Response Document.

**Response:** See Comment 9 on the technical review memo for draft Plan Approval No. 23-0119E (revised), along with DEP’s response.

**Comments on DEP’s Technical Review Memo for Draft Plan Approval No. 23-0119E (Revised)**

**1. and 7. PSD Analysis section [page 11, last paragraph] and NSR Analysis section [page 16, first paragraph], respectively:**

**Comment:** SPMT concurs with DEP that, under RFD 5597, the 15-2B cooling tower experienced a physical change that resulted in emissions increases of particulate matter [PM], PM less than 10  $\mu\text{m}$  in aerodynamic diameter [PM<sub>10</sub>], and PM less than 2.5  $\mu\text{m}$  in aerodynamic diameter [PM<sub>2.5</sub>], but does not concur that DEP should evaluate the emissions increases “as if the physical change did not occur.” Rather, based on the fact that the physical change does not relate to NGLs processing, storage, and distribution operations at the facility, SPMT contends that DEP should evaluate the emissions increases as incremental emissions increases.

**Response:** As indicated in the *PSD Analysis* section of the technical review memo [page 12, second bullet], because the physical change does not relate to NGLs processing, storage, and distribution operations at the facility, for calculation purposes, DEP has evaluated the emissions increases of PM, PM<sub>10</sub>, and PM<sub>2.5</sub> for the 15-2B cooling tower as incremental emissions increases. DEP stated that it “has evaluated the 15-2B cooling tower as if the physical change did not occur” because, as the NGLs have undergone construction/a modification, pursuant to PSD [Prevention of Significant Deterioration of Air Quality] and NSR regulations, respectively, the 15-2B cooling tower should be evaluated as an existing emissions unit (i.e., with the emissions increase being the difference between the projected actual emissions and baseline actual emissions). Therefore, the statement will remain in the technical review memo as is. However, to further justify evaluating the emissions increases as incremental emissions increases, DEP has added a parenthetical note that “this approach results in the determination of greater emissions increases of PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.”

**2. and 13.–14. PSD Analysis section [page 12, first bullet] and Additional Information for the Auxiliary Boilers section [Tables 4–5], respectively:**

**Comment:** SPMT does not concur with DEP’s analysis of the emissions from the auxiliary boilers. Specifically, SPMT contends that the total steam demand presented in Table 4 “does not reflect the planned facility steam demand of the [single] aggregated project” and, with the exception of carbon monoxide [CO], the *lbs/lb steam* emissions factors presented in Table 5 “do not accurately reflect the current performance (short-term emissions rate) of the [a]uxiliary [b]oilers as operated.” As such, SPMT expresses that it “does not wish to change either the annual or short-term emissions rate limits of the [a]uxiliary [b]oilers[, but, s]hould [DEP] wish to represent ... the incremental emissions for the [a]uxiliary [b]oilers ... using the method presented in the [technical review memo], SPMT requests the opportunity to present new short-term emissions rates based on current [a]uxiliary [b]oiler performance and a more representative facility operational steam demand” for DEP’s analysis.

**Response:** As indicated in the *PSD Analysis* section [page 12, first bullet] and *NSR Analysis* section [page 16, first bullet] of the technical review memo, since “the auxiliary boilers [...] did not experience a physical change or a change in the method of operation,” DEP has evaluated the emissions increases of CO, carbon dioxide equivalents [CO<sub>2</sub>e], lead [Pb], nitrogen dioxide [NO<sub>2</sub>]/NO<sub>x</sub>, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur dioxide [SO<sub>2</sub>], sulfuric acid mist [H<sub>2</sub>SO<sub>4</sub>], and VOCs as incremental emissions increases. (DEP considers this approach to be appropriate versus the potential to emit minus baseline actual emissions approach used in Plan Approval No. 23-0119B.) To this end, “DEP determined the ... incremental emissions increases ... by multiplying the total steam demand associated with the affected sources and equipment of the single aggregated project by the corresponding emission factors provided by SPMT in the applications for the minor modification to TVOP No. 23-00119 (CO) and the original Plan Approval No. 23-0119E (all other pollutants).”

Since the time that SPMT submitted this comment (i.e., in April 2020), it has provided an updated source-by-source breakdown of the actual MHIC operational steam demand (see *Attachment A*), as well as updated emission

factors for all pollutants (including CO) based on 2018–2019 auxiliary boiler performance. In its previous determination of the incremental emissions increases for the auxiliary boilers, DEP considered the entire base MHIC steam demand to be unrelated to the sources and equipment of the single aggregated project. However, based on the source-by-source breakdown, DEP considers the steam demand for additional (highlighted) supporting sources and equipment at the MHIC, listed under the “general use/facility baseload” grouping, to be related to the sources and equipment of the single aggregated project. While the updated emission factors for CO, PM, PM<sub>10</sub>, and PM<sub>2.5</sub> are less than those used by DEP in its previous determination of the incremental emissions increases for the auxiliary boilers, the emission factors for the other pollutants, most notably CO<sub>2e</sub> and NO<sub>x</sub>, are greater. Nonetheless, after accounting for the lower actual operational steam demand from the sources and equipment of or related to the single aggregated project (and the projected operational steam demand from the sources and equipment proposed under Plan Approval No. 23-0119J), DEP has calculated lower incremental emissions increases of CO and NO<sub>x</sub> for the auxiliary boilers (see revised *Attachments #3* and *#6* of DEP’s technical review memo).

### **3. PSD Analysis section [page 13 (first full paragraph)]:**

**Comment:** SPMT does not concur with DEP’s determination that emissions from the West Warm Flare are “related to the [single] aggregated project,” instead “contend[ing] that the emissions ... are contemporaneous, and should not be considered as part of the project emissions totals.” To this point, SPMT states that “the West Warm Flare ... was constructed as a replacement for the ethylene complex [(EC)] flare located in Delaware,” and asserts that, when DEP permitted the West Warm Flare under Plan Approval No. 23-0119H, the Plan Approval “was not identified as project [*sic*] to be evaluated as part of the [single] aggregated project.”

**Response:** As indicated in the *PSD Analysis* section [page 13 (first full paragraph)] of the technical review memo, DEP concurs that “[t]he West Warm Flare is effectively a replacement unit for the EC Flare, which had received flows from various sources and equipment at the Braskem America facility at the MHIC since before SPMT began its NGLs processing, storage, and distribution operations there.” Moreover, “74.9%, *by weight*, of the VOC flow to the West Warm Flare is from sources and equipment at the Braskem America facility, not SPMT.” Therefore, “DEP does not consider the West Warm Flare itself to be part of the single aggregated project” and, consequently, the date that SPMT replaced the EC Flare with the West Warm Flare is irrelevant.

However, the remaining 25.1%, *by weight*, of the VOC flow to the West Warm Flare is from sources and equipment at the MHIC that are part of the single aggregated project. Since the purpose of Plan Approval No. 23-0119E (revised) is for DEP to evaluate all past and future projects related to the NGLs processing, storage, and distribution operations at the MHIC as a single aggregated project to determine the applicability of PSD and NSR requirements, DEP has considered the flows to the West Warm Flare and associated emissions from all sources and equipment of the single aggregated project. (Since “DEP does not consider the West Warm Flare ... to be part of the single aggregated project,” DEP has evaluated these emissions increases as incremental emissions increases.) Indeed, the project emissions analysis in Section 3 of SPMT’s application for Plan Approval No. 23-0119E (revised) includes incremental emissions increases associated with flows to the West Warm Flare from certain sources and equipment of the single aggregated project. Therefore, DEP does not concur with SPMT’s contention that these emissions “should not be considered as part of the project emissions totals.”

### **4., 10., and 15.–16. PSD Analysis section [Table 1], NSR Analysis section [Table 3], and Attachments #2 and #5, respectively:**

**Comment:** SPMT requests that the values indicated in Tables 1 and 3 and *Attachments #2* and *#5* for the emissions increases for the single aggregated project be revised to reflect any changes to DEP’s emissions accounting for Plan Approval No. 23-0119E (revised) prior to final issuance.

**Response:** DEP concurs and has revised the values of the emissions increases to reflect all such changes. [Note: The attachment numbers for the *PSD Analysis* and *NSR Analysis* have been changed to *#3* and *#6*, respectively.]

### 5. PSD Analysis section [Table 2]:

**Comment:** As previously discussed in Comments 2.–3. on DEP’s technical review memo for draft Plan Approval No. 23-0119E (revised), above, SPMT contends that the emissions increases presented in Table 2 should be revised.

**Response:** See DEP’s responses to Comments 2.–3. on DEP’s technical review memo for draft Plan Approval No. 23-0119E (revised), above.

### 6. NSR Analysis section [page 15 (last paragraph)]:

**Comment:** SPMT contends that the marine vessel loading, as previously permitted under TVOP No. 23-00001, was also capable of accommodating light naphtha as a petroleum product. Along this line, in its application for Plan Approval No. 23-0119B, SPMT did not consider the marine vessel loading (non-refrigerated) to be modified, and evaluated the associated emissions increase of VOCs from increased utilization of the marine vessel loading as an incremental emissions increase. Therefore, SPMT requests that DEP revise its analysis to use the value of the incremental emissions increase of VOCs presented in the application for Plan Approval No. 23-0119B (i.e., 3.71 tons/yr) instead.

**Response:** DEP concurs that the marine vessel loading, as previously permitted under TVOP No. 23-00001, was also capable of accommodating light naphtha as a petroleum product. Accordingly, DEP has revised the *PSD Analysis* and *NSR Analysis* sections of the technical review memo to indicate that it does not consider the marine vessel loading (non-refrigerated) to have undergone construction/a modification, respectively. DEP also concurs with determining whether or not an emissions increase of VOCs is associated with the marine vessel loading based on whether it experienced an increase in utilization. However, in its application for Plan Approval No. 23-0119B, SPMT only considered the VOC emissions from the marine vessel loading of light naphtha itself, not whether there was an increase in utilization as compared to when the source was permitted under the TVOP. Based on DEP records, the average historical throughput for the marine vessel loading in 2010–2011 (i.e., the same timeframe used to calculate the BAE for other existing emissions units) was 18.91 *Mbbl/day*. While SPMT indicated in its application for Plan Approval No. 23-0119B that the planned throughput for the marine vessel loading was 10 *Mbbl/day*, the actual average throughput over 2015–2019 was 33.99 *Mbbl/day*. Since the actual average throughput has been greater than the average historical throughput in TVOP No. 23-00001, DEP has based the emissions increase of VOCs on the increase in utilization (i.e.,  $33.99 \text{ Mbbl/day} - 18.91 \text{ Mbbl/day} = 15.08 \text{ Mbbl/day}$ ). Using the same calculation methodology that SPMT used in its application for Plan Approval No. 23-0119B (i.e., EPA’s AP-42, Volume I, Fifth Edition (AP-42), Section 5.2, Equation 1, multiplied by an overall reduction efficiency term), DEP has calculated the corresponding emissions increase of VOCs for the marine vessel loading to be 5.59 tons/yr.

### 8. NSR Analysis section [page 16 (second paragraph)]:

**Comment:** SPMT asserts that “Tanks 607, and 611 were not identified as modified sources under Plan Approval [Nos.] 23-0119B ... or 23-0119F,” and contends that “[these tanks], as constructed, were capable of accommodating [the] storage of natural gasoline.” Specifically, SPMT points to sub-facility groupings in TVOP No. 23-00001 that included requirements for the tanks from 40 CFR Part 60, Subpart Kb, and 40 CFR Part 63, Subpart G, and contends that “[c]ompliance with those standards allow for the storage of petroleum liquids that have a vapor pressure of 11.1 *psia* or less in internal floating roof tanks.” In addition, SPMT contends that the “change in the method of operation which would increase the amount of an air contaminant emitted by the source,” as indicated by DEP for the tanks in meeting the definition of the term “modification” in 25 Pa. Code § 121.1, is “equivalent to an increase in the hours of operation as the tanks continued to store the same category of material and only the throughput was increased.” Finally, SPMT claims that the change meets exemption criteria for “[t]he use of an alternative fuel or raw material” under the term “major modification,” as defined in 25 Pa. Code § 121.1.

Regarding Tank 23, SPMT asserts that “[DEP] had determined that [the tank] was not modified by the incremental increase in usage allowed under Plan Approval [No.] 23-0119F.” In addition, SPMT contends “that the discussion of the emissions increases associated with Tank 23 are not appropriate to discuss as part of the aggregated project, as it is not an aggregated source.” Finally, SPMT states that “[the tank] was emptied and cleaned [out] in February 2018 and has since been closed in place and removed from [TVOP No.] 23-00119.”

**Response:** While DEP concurs that Tanks 607 and 611 were capable of accommodating the storage of natural gasoline under TVOP No. 23-00001, DEP does not concur that Tanks 607 and 611 were not modified. As indicated in the *NSR Analysis* section [page 16 (second paragraph)] of the technical review memo, DEP considers Tanks 23, 607, and 611 to have been modified based on the increase to the associated VOC emission restrictions under Plan Approval No. 23-0119F (i.e., as compared to the combined VOC emission restriction under TVOP No. 23-00001), which meets the definition of the term “modification” in 25 Pa. Code § 121.1. Moreover, DEP does not concur with SPMT’s application of the term “major modification” for the following reasons:

- The change in the method of operation does not result in a significant emissions increase or a net emissions increase of a regulated NSR pollutant.
- Since the tanks were capable of accommodating the storage of natural gasoline under TVOP No. 23-00001, natural gasoline does not qualify as an alternative fuel or raw material.

Therefore, DEP’s analysis for Tanks 607 and 611 will remain as is.

As indicated in Footnote 13 at the bottom of page 7 of the technical review memo, DEP concurs that Tank 23 is not part of the single aggregated project. However, DEP considers it appropriate to discuss the associated emissions increase of VOCs because the tank was previously part of a combined VOC emission restriction with other tanks that are part of the single aggregated project, and because it falls within the look-back period for determining the aggregated emissions increase of VOCs for the single aggregated project, calculated pursuant to 25 Pa. Code § 127.203(b)(1)(i). Therefore, DEP’s analysis for Tank 23 will remain as is (though the corresponding emissions decrease of VOCs from its removal from service may be considered during subsequent NSR analyses for future projects).

**9 and 11. *NSR Analysis* section [page 16 (third paragraph)] and *NSR Requirements* section [page 19 (first sub-bullet)], respectively:**

**Comment:** SPMT contends that “Tank 609, as constructed, was capable of accommodating the storage of natural gasoline or other petroleum liquids even though the previous owner/operator only permitted the tank to store benzene.” Specifically, SPMT points to sub-facility groupings in TVOP No. 23-00001 that included requirements for the tank from 40 CFR Part 60, Subpart Kb, and 40 CFR Part 63, Subparts G and CC, and contends that “[c]ompliance with those standards allow for the storage of petroleum liquids or other HAP containing materials that have a vapor pressure of 11.1 *psia* or less in internal floating roof tanks.” In addition, SPMT claims that the change meets exemption criteria for “[t]he use of an alternative fuel or raw material” under the term “major modification,” as defined in 25 Pa. Code § 121.1. Therefore, SPMT does not consider the tank to have been modified or subject to Lowest Achievable Emission Rate (LAER) requirements.

**Response:** DEP does not concur. While other tanks that were part of the same sub-facility groupings in TVOP No. 23-00001 may have been permitted to store other petroleum liquids and comply with the indicated requirements, Tank 609 was only permitted to store benzene. As indicated in the *NSR Analysis* section [page 16 (third paragraph)] of the technical review memo, DEP considers the tank to have been modified (and subject to LAER requirements) based on “the emission of an air contaminant not previously emitted,” which meets the definition of the term “modification” in 25 Pa. Code § 121.1. [Note: DEP has since revised the paragraph to indicate that the increases to the associated VOC emission restriction under Request for Determination of Changes of Minor Significance and Exemption from Plan Approval/Operating Permit (RFD) No. 5340 and Plan Approval No. 23-0119F (i.e., as compared to that under TVOP No. 23-00001) also meet this definition.] Moreover, DEP does not concur with SPMT’s application of the term “major modification,” as the change in the

method of operation does not result in a significant emissions increase or a net emissions increase of a regulated NSR pollutant. Therefore, DEP's analysis for Tank 609 will remain as is.

## **12. NSR Requirements section [page 20 (Subsection A.3.)]:**

**Comment:** SPMT indicates that the “flare vendor ... could not provide a guarantee for a greater [VOC] DRE [(destruction and removal efficiency) than 98%] due to the specific composition of the anticipated flows to the Project Phoenix Cold Flare including VOCs containing four or more carbons.” In addition, SPMT indicates that it “has not [been] able to identify an accepted test protocol or set of operating procedures to demonstrate compliance with [a VOC] DRE of greater than 98% in practice for a flare of this type. [Therefore,] SPMT requests that [DEP] provide a written recommendation for review and comment for demonstrating compliance with the proposed 99% [VOC] DRE for the Project Phoenix Cold Flare.”

**Response:** In its review of the applications for Plan Approval Nos. 23-0119E (revised) and 23-0119J, DEP corresponded with Ms. Anne Inman, P.E., Air Permits Division, Texas Commission on Environmental Quality (TCEQ), regarding LAER requirements established for flares by TCEQ. Ms. Inman indicated that TCEQ considers a VOC DRE of 99% to constitute LAER for flares processing flows where the portion of VOCs containing more than three carbon atoms is less than or equal to 1%. [Note: DEP has since revised the subsection to specify this.] Since the time that SPMT submitted this comment (i.e., in April 2020), DEP and SPMT have had additional discussions regarding this concern. In addition, both DEP and SPMT have corresponded with Ms. Inman to discuss the means of a flare demonstrating compliance with such a VOC DRE restriction to TCEQ, in particular without a vendor guarantee. Ms. Inman has conveyed that, for a flare processing the materials that the Project Phoenix Cold Flare is proposed to process (i.e., methane/natural gas, ethane, propane, and fuel gas), TCEQ would consider compliance with the design and operating requirements of 40 CFR § 60.18 (including maximum exit velocity, visible emissions, and a minimum net heating value for gas streams combusted in flares) sufficient to demonstrate compliance with the VOC DRE restriction of 99% (regardless of vendor guarantee).

Nonetheless, since the time that SPMT submitted this comment, SPMT has requested that DEP change the language of Condition # 002, Section D (under Source ID C04), of Plan Approval No. 23-0119J, such that the VOC DRE restriction is tiered to 98.0% or 99.0% based on whether the portion of the VOC flow processed contains more than three carbon atoms or no more than three carbon atoms, respectively. DEP does not concur. DEP has analyzed the flows to each of the cold flares of the single aggregated project, and has calculated the total percentages of hydrocarbons and VOCs containing more than three carbon atoms for each cold flare tip (see *Attachment B*). While the total percentage of VOCs for the high-pressure (HP) cold flare tip of the Project Phoenix Cold Flare containing more than three carbon atoms is calculated as slightly greater than 1%, the calculation is based on a conservative isobutane content for the propane proposed to be used in the refrigeration system and also assumes no concurrent flows to the low-pressure (LP) cold flare tip. Therefore, the VOC DRE restriction for the Project Phoenix Cold will remain as is. However, based on the flows to the West Cold Flare, DEP has changed the language of Condition # 002, Section D (under Source ID C01), of the Plan Approval No.23-0119E (revised), such that the associated VOC DRE restriction is 99.0% whenever flows are being sent to the LP cold flare tip only (and 98% otherwise).

## **Comments on Draft Plan Approval No. 23-0119J**

### **1. Condition # 001, Section C:**

**Comment:** SPMT requests that the values indicated for the amounts of NO<sub>x</sub> and VOC ERCs required for Project Phoenix be revised to reflect any changes in the NSR analysis for Plan Approval No. 23-0119J prior to final issuance.



**Response:** DEP concurs and has revised the value of the VOC ERCs to reflect all such changes in the NSR analysis. [Note: NO<sub>x</sub> ERCs for the NO<sub>x</sub> emissions related to Project Phoenix remain required via the NSR analysis for Plan Approval No. 23-0119E (revised) only].

**2. Condition # 003, Section D (under Source ID 103):**

**Comment:** SPMT requests that DEP define the term “‘commencement of operation’ ... in practical terms to clarify SPMT’s compliance obligation for new pumps or valves in gaseous or light liquid service.”

**Response:** Generally speaking, DEP considers commencement of operation of a source to occur when the source is first operated, regardless of whether the initial operation is considered to be within normal or safe operating parameters. Thus, for the new piping and components, DEP considers commencement of operation to have occurred when VOCs are first introduced to them.

**3. Condition # 007, Section D (under Source ID 141):**

**Comment:** SPMT requests that DEP revise the frequency of monitoring the cooling water in the WSAC systems for leaks to mirror that in TVOP No. 23-00119 for the existing cooling towers at the MHIC (i.e., “monthly sampling for 6 months initially and following completion of a leak repair followed by quarterly sampling should no leaks be detected for 6 months of sampling.”)

**Response:** DEP does not concur. The frequency of monitoring the cooling water in the WSAC systems for leaks mirrors the provisions for new individual heat exchangers in 40 CFR § 63.1086(b)(1)(ii)(A)–(B). The condition will remain in the Plan Approval as is.

**4. Condition # 002, Section D (under Source ID C04):**

**Comment:** SPMT contends that “a VOC [DRE] of 99% is [not] appropriate for the Project Phoenix Cold Flare. ... SPMT is not aware of a compliance demonstration for this level of [DRE] for a flare of this type. [Therefore,] SPMT requests that [DEP] provide a written recommendation for review and comment for demonstrating compliance with the proposed 99% [VOC] DRE for the Project Phoenix Cold Flare.”

**Response:** See Comment 12 on the technical review memo for draft Plan Approval No. 23-0119E (revised), along with DEP’s response.

**5. Conditions # 003 and 006(a), Section D (under Source ID C04):**

**Comment:** SPMT contends that these conditions indicate different deadlines for submitting the initial test report for the Project Phoenix Cold Flare (i.e., 240 days and 6 months following the commencement of operation, respectively). Therefore, SPMT requests that DEP clarify the appropriate deadline for submitting the initial test report.

**Response:** The more stringent deadline is based on the provisions of 40 CFR § 60.115b(d)(1). However, since authority to implement this provision is delegated to DEP as per 40 CFR § 60.117b, DEP has reworded Condition # 006(a) to reference the deadline indicated in Condition # 003(d) (i.e., “[w]ithin 60 days after the stack test”).

**6. Condition # 006(c), Section D (under Source ID C04):**

**Comment:** SPMT states that “[s]emi-annual reports for other flares permitted at the MHIC are due within 31 days of the end of the covered period. [Therefore,] SPMT requests that this condition be standardized to match.”

**Response:** DEP concurs and has change the deadlines indicated in Condition # 006(c)(1)–(2) to January 31 and July 31, respectively.

**7. Condition # 009(b)–(c), Section D (under Source ID C04):**

**Comment:** SPMT states that the references indicated in the condition are incorrect (i.e., Condition # 008(a)–(b), Section D (under Source ID C04), instead of Condition # 007(a)–(b), Section D (under Source ID C04)).

**Response:** DEP concurs and has corrected the references.

**Comments on DEP’s Technical Review Memo for Draft Plan Approval No. 23-0119J**

**1. Emissions/Regulatory Analysis section [page 6 (Subsection C.)]:**

**Comment:** SPMT contends that a VOC DRE of 99% “is inappropriate for the Project Phoenix Cold Flare and the composition of flows expected to be controlled by this source. As a result of the application of the 99% DRE, VOC emissions calculated by [DEP] and shown in Table 3 ... are 50% of the emissions rates for which SPMT applied.”

**Response:** See Comment 12 on the technical review memo for draft Plan Approval No. 23-0119E (revised), along with DEP’s response.

**2. Emissions/Regulatory Analysis section [page 7 (Subsection D., Table 4)]:**

**Comment:** SPMT contends that the “emissions presented in Table 4 were calculated using emission factors which do not reflect the current performance of the auxiliary boilers[ and, w]ith the exception of CO, ... do not accurately reflect the current performance (short-term emissions rate) of the [a]uxiliary [b]oilers as operated.”

**Response:** See Comments 2 and 13–14 on the technical review memo for draft Plan Approval No. 23-0119E (revised), along with DEP’s response.

**3. Emissions/Regulatory Analysis section [page 7 (Table 6)]:**

**Comment:** “SPMT requests that the emissions increases presented in Table 6 ... be revised following any change to [DEP’s] emissions accounting prior to the final issuance of Plan Approval [No.] 23-0119J.”

**Response:** DEP concurs and has revised the values of the emissions increases to reflect all such changes.

Sunoco Partners Marketing & Terminals, L.P.  
 Auxiliary Boiler Analysis  
 Projected Steam Users  
 December 2020

**450 Pound Pressure Steam Users**

Steam User	Summer Demand (MLB/HR)	Winter Demand (MLB/HR)	Grouping
Mariner 2 Dehydrator Regen Vaporizer	17.6	18.0	Plan Approval 23-0119D
Braskem Polymer Unit	24.5	29.9	MHIC Steam User
Race Fuels Separations Plant	2.9	2.0	MHIC Steam User
Estimated Losses	2.0	2.0	General Use/Facility Baseload
<b>450 lb. TOTAL</b>	<b>47</b>	<b>52</b>	

**150 Pound Pressure Steam Users**

Steam User	Summer Demand (MLB/HR)	Winter Demand (MLB/HR)	Grouping
Boilerhouse Utility and MHEC Seal Steam for S/U	2.1	2.1	General Use/Facility Baseload
West Warm Flare	9.8	10.0	Plan Approval 23-0119H
Propane Rail Rack Vaporizer	2.4	0.9	General Use/Facility Baseload
Butane Rail Rack Vaporizer	3.9	4.0	General Use/Facility Baseload
Revolution	56.8	61.9	Plan Approval 23-0119E
C5 Splitter	34.3	36.9	Plan Approval 23-0119B
Additional Depropanizer	36.2	38.9	Plan Approval 23-0119E
Braskem Splitters	112.6	129.7	MHIC Steam User
2 & 3 Sump	1.5	0.5	General Use/Facility Baseload
Bundle Wash Pad	0.0	0.0	General Use/Facility Baseload
Mech. Shop & E&I Shop	0.8	0.2	General Use/Facility Baseload
854 Bldg.	0.0	0.3	General Use/Facility Baseload
Braskem Field Shop	0.0	0.3	MHIC Steam User
Braskem 4 Cavern	0.0	1.0	MHIC Steam User
1 Cavern	0.0	1.0	General Use/Facility Baseload
3, 4, & 16 Spheres	0.0	1.0	General Use/Facility Baseload
Mariner 1	2.5	3.0	Plan Approval 23-0119A
Mariner 2	1.0	1.0	Plan Approval 23-0119D
Dock 3C	0.0	0.5	General Use/Facility Baseload
Dock 3A	0.0	0.5	General Use/Facility Baseload
Dock 2A	0.0	0.5	General Use/Facility Baseload
Dock 1A	0.0	0.5	General Use/Facility Baseload
Spill Response Ctr.	0.0	1.0	General Use/Facility Baseload
MOB	2.0	15.0	General Use/Facility Baseload
Gym/Firehouse	0.0	0.5	General Use/Facility Baseload
Firewater Header Tracing	0.0	0.5	General Use/Facility Baseload
Tk132/137/139 Area & Firewater Tracing	0.0	0.5	General Use/Facility Baseload
Sphere 21 & 22 (Revolution)	0.0	0.5	Plan Approval 23-0119E
Sphere 1 & 2 (Revolution)	0.0	0.5	Plan Approval 23-0119E

Steam User	Summer Demand (MLB/HR)	Winter Demand (MLB/HR)	Grouping
5 Cavern (Incl. Dehydrator Regen Vaporizer)	2.0	2.5	General Use/Facility Baseload
Sunoco Auto Lab	0.0	1.0	MHIC Steam User
H-5 Control Room	0.0	1.0	Plan Approval 23-0119B
2 Cavern	0.0	1.0	General Use/Facility Baseload
Braskem Rail Unloading & Propane Truck Rack	0.0	1.0	MHIC Steam User
3 Cavern	0.0	1.0	General Use/Facility Baseload
Race Fuels Blend Plant	0.0	1.0	MHIC Steam User
North Yard Maint. Bldgs.	0.0	0.5	General Use/Facility Baseload
Estimted Misc. Tracing (assume Winter conditions)	9.8	10.0	General Use/Facility Baseload
Estimated losses	24.5	25.0	General Use/Facility Baseload
<b>150 lb. TOTAL</b>	<b>302</b>	<b>357</b>	

Steam User	Summer Demand (MLB/HR)	Winter Demand (MLB/HR)
GRAND TOTAL	349	409

## Cold Flare Percent Hydrocarbon and Percent VOC Calculations

Cold Flare Name	Cold Flare Tip Type	Flow Composition/Quantity (lbs/yr)							Totals		
		Natural Gas	Methane	Ethane	Propane	Butanes	Pentanes	Hexane	Flow (lbs/yr)	% HCs >C3	% VOCs >C3
West Cold Flare	HP	23,322	27,767	250,480	433,061	145,363	5873	0.0262	862,544	17.534%	25.883%
	LP	0	2,733	988,319	424,111	0	47	0	1,415,210	0.00332%	0.0111%
	Totals	23,322	30,500	1,238,799	857,172	145,363	5,920	0.0262	2,277,755	6.642%	15.002%
East Cold Flare	LP	0	29	815,470	1,166,235	826,325	24902	0	2,832,961	30.047%	42.193%
Project Phoenix Cold Flare	HP	2,838,241	2,816,396	183,322	127,481	1,466	8.398	3.188	3,128,677	0.0472%	1.146%
	LP	798,912	785,679	3,702,530	194,533	48.920	2.364	0.897	4,682,795	0.00111%	0.0268%
	Totals	3,637,153	3,602,075	3,885,852	322,014	1,515	10.76	4.086	7,811,472	0.020%	0.473%

### Notes

- 1) Natural gas composition is assumed to be 97.430% methane, 2.200% ethane, 0.0736% propane, 0.00612% butanes, 0.000296% pentanes, and 0.000112% hexane based on 2019 daily average gas chromatograph data from SPMT's natural gas provider, and the associated flows are already considered under these pollutants.
- 2) Based on Table D-6 in SPMT's application for Plan Approval No. 23-0119J (for the propane refrigeration system), propane for the HP flare tip for the Project Phoenix Cold Flare is conservatively assumed to be 1/98th isobutane.