TESORO

Tesoro Refining and Marketing Company, Salt Lake City Refinery respectfully submits the following comments to the proposed PM 2.5 State Implementation Plan (SIP). These comments are in response to the notices in the November 1, 2013 Utah State Bulletin (DAR Files 38048, et seq.) regarding the proposed $PM_{2.5}$ State Implementation Plan.

The following is a brief summary of the control equipment Tesoro will install in support of the $PM_{2.5}$ SIP. Tesoro plans to install a Wet Gas Scrubber with emission reductions of approximately 582 tons per year (tpy) $S0_2$ and 106 tpy NO_x. Tesoro will install Ultra Low NO_x burners on the Ultraformer F-1 furnace with emission reductions of approximately 17 tpy NOx. The proposed Leak Detection and Repair Requirements specify a lower leak threshold which Tesoro has been meeting since January of 2003. Tesoro also plans to install flare gas recovery and treatment on both hydrocarbon flares. The SIP also requires tank degassing controls by January 1, 2017. Tesoro has been controlling tank degas emissions since 2009.

Tesoro's comments below pertain to the proposed new SIP sections IX.H.11 and 12, as well as the supporting documentation to the proposed requirements.

Comments on IX H I l.g — General Requirements for Petroleum Refineries

H.11.g.f.A.III. SO_2 emissions during periods of Startup, Shutdown, or Malfunction shall not be used in determining compliance with the emission limit of 50 ppmvd @ 0% excess 0_2 on a 7-day rolling average basis, provided that during such periods the owner or operator implements good air pollution control practices to minimize SO_2 emissions.

To be consistent with the language in "Limits on Refinery Fuel Gas" in H.11.g.ii and "FCCU PM Emissions" in H.11.g.i.B and to provide coverage for all applicable SO_2 emissions limits, Tesoro proposes this paragraph to be modified as follows:

> *"SO_2 emissions during periods of Startup, Shutdown, or Malfunction shall not be used in determining compliance with the emission limits in I, II above provided that during such periods the owner or operator implements good air pollution control practices to minimize SO2 emissions. "*

H.11.g.iiiA. Each owner or operator shall comply with the requirements of 40 CFR 63.654 for heat exchange systems in VOC service as soon as practicable but no later than January 1, 2018. The owner or operator may elect to use another EPA-approved method other than the Modified El Paso Method if approved by the Director.

To provide flexibility if EPA approves additional cooling tower monitoring methods, Tesoro proposes the following modification to the paragraph:

> "*... The owner or operator may elect to use another method other than the Modified El Paso Method if approved by the Director or EPA ".*

H.11.g.iv. Leak Detection and Repair Requirements

Tesoro proposes adding an additional paragraph to clarify the required monitoring frequency as follows:

> *"Prior monitoring at equivalent leak definitions can be used to establish initial skip monitoring periods. "*

H. 11.g. v. Requirements on Hydrocarbon Flares

Based on the analysis done by the State's own contractor, flare gas recovery exceeds both the technical and economic basis for RACT. EPA recognized this in establishing the NSPS Subpart Ja rule finalized in September 2012. Subpart Ja represents Best Determined Technology (BDT) for refinery flare systems. In Subpart Ja, EPA set BDT as requiring a Flare Management Plan (FMP) and implementation of flare gas recovery only where economically justified or required to meet sulfur limitations. The rule proposed by the state exceeds BDT (and hence RACT) as determined by EPA in Subpart Ja.

In addition, emission reductions claimed by the state will be met by the FMP's and other NSPS Ja requirements. Additional reductions from the blanket flare gas recovery requirement are minimal.

Tesoro recommends requiring each refinery to meet the requirements of NSPS Ja as stated in paragraph A, and remove paragraph B from the SIP.

H.11.g.v.B. By no later than January 1, 2019, all petroleum refineries in or affecting a designated PM2.5 non-attainment area within the State shall install and operate a fare gas recovery system designed to limit hydrocarbon flaring from each affected flare to levels below the values listed in 40 CFR 60.103a(c), except during periods of startup, shut down, or malfunction.

This section is difficult to understand as currently written. This section could be interpreted such that flare gas recovery is not required if the limits in 40 CFR 60.103a(c) can be met without installation of flare gas recovery.

In addition, as discussed in section 2.6 of the Refinery Technical Support Document, recovery of gases from HF alkyation and acid gas from sulfur recovery units poses significant technical challenges. Should the state reject Tesoro's previous recommendation and require Flare Gas Recovery, Tesoro requests clarification of the rule's intent. Tesoro proposes appending the following language to the requirement:

> *"Flare gas recovery is not required for dedicated SRU flares, SRU flare header systems, nor HF flare header systems."*

H.12.r.i. Source-wide PM2.5
Tesoro's maximum filterable $PM_{2.5}$ emissions to the atmosphere shall not exceed 0.42 tons per day and 110 tons per rolling 12-month period for the entire refinery.

Tesoro proposes a revision to condition H.12.r.i to make the language consistent with conditions H.12.r.ii and H.12.r.iii as well as other refinery PM2.5 sections. The conditions do not contain the language "for the entire refinery".

~~"Tesoro's maximum filterable~~ $PM_{2.5}$ emissions ~~to the atmosphere~~ from all combustion sources shall not exceed 0.42 tons per day (tpd) and 110 tons per rolling 12-month period ~~for the entire refinery"~~

Consistent with the General Requirements of Section H.11, Tesoro proposes that the following language be added to this section:

> *"$PM_{2.5}$ emissions and opacity caused by or attributable to the Startup, Shutdown, or Malfunction shall not be used in determining compliance with the daily limits."*

Tesoro operates a CO Boiler which requires daily periodic cleaning of the internal boiler surfaces to maintain heat transfer efficiency. Tesoro proposes that the following language be added to this section to exempt these short-term emissions from compliance requirements:

"$PM_{2.5}$ emissions and opacity caused by or attributable to Soot Blowing at the CO Boiler shall not be used in determining compliance with the daily limits nor the opacity limits established in R307-305-3. "

H. 12. r. i. (7th Paragraph)
By no later than January 1, 2019, Tesoro shall conduct stack testing to establish the ratio of condensable PM2.5 from the FCCU wet gas scrubber stack and SRU/TGTU/TGL

Tesoro requests that the requirement to test the SRU/TGTU/TGI be deleted. This requirement is only included in Tesoro and Chevron's source specific conditions. Conducting the $PM_{2.5}$ test at the SRU Incinerator would pose significant technical challenges due to the incinerator stack gas conditions and may not result in accurate results. The high temperature of the incinerator exhaust requires a refractory-lined stack, which may be damaged by installation of the large ports necessary to complete Method 202 condensable PM stack testing. Additionally, results of the testing may be biased high as a result of 502 present in the stack gas, which has the potential to form condensable PM in the sampling equipment. The condensable PM emissions from the SRU/TGTU/TGI are expected to be relatively small compared to other sources at Tesoro and in Salt Lake County, which limits the benefits of quantifying condensable PM emissions from this source.

H..12. r. ii. Source-wide NOx
Combined emissions of NOx shall not exceed 0.82 tons per day (tpd) and 300 tons per rolling 12-month period.

Tesoro requests the daily NOx limit of 0.82 tpd be changed to the current limit of 1.988 tpd. A daily limit of 0.82 tpd is a reduction of 60% from Tesoro's allowable daily limit. The RACT Evaluation Report identified annual NOx emission reductions which Tesoro can achieve. However a daily limit of 0.82 tons per day would require significant more reductions than what was established as RACT. The RACT Evaluation Report did not focus on reductions in short-term emissions. Daily emissions are more variable than annual emissions due to changes in utilization inherent to operating a refinery. The current SIP limits (1.988 tpd, 598 tons per year) were developed to reflect this relationship between daily and annual emissions.

Tesoro requests that the annual limit of 300 tons per rolling 12-month period be changed to the limit of 475 tons per rolling 12-month period. A NOx reduction of 106 tpy from the FCU and 17 tpy from the F-I Heaters was identified as RACT in the RACT Evaluation Report. No further NOx reductions were identified and therefore should not be applied to the permitted limit of 598 tons per year. Basing the revised annual emission limit on 2008 actual emissions rather than allowable emissions does not adequately allow for normal business growth.

The limits as currently written do not indicate an effective date, and are based upon expected actual emissions following installation of RACT. Tesoro proposes the following language be added to this section to allow time for installation of control equipment:

"Combined emissions of NOx shall not exceed 1.988 tons per day (tpd) and 475 tons per rolling 12-month period by not later than January 1, 2019. "

Consistent with the General Requirements of Section H.11,Tesoro proposes the following language be added to this section:

"NOx emissions caused by or attributable to the Startup, Shutdown, or Malfunction shall not be used in determining compliance with the daily limits. "

H. r. iii. Source-wide S02
Combined emissions of S02 shall not exceed 0.82 tons per day (tpd) and 300 tons per rolling 12-month period

Tesoro requests the daily S02 limit of 0.82 tpd be changed to 3.1 tpd. This equates to a reduction in the daily limit of S02 emissions of 48% compared to the current limit of 4.374 tpd during March 1 - October 31. A limit of 3.1 tpd also corresponds to the RACT Evaluation Report which included the following:

NSPS Subpart Ja limit: 3 hour average limit of 162 ppm $H_2$5 in the refinery fuel gas

NSPS Subpart Ja limit: 7 day average of 50 ppm @0% 02 following the installation of a Wet Gas Scrubber at the FCCU

Flare gas recovery and flared gas that meets 162 ppm H2S

Current SRU limit of 1.68 tpd following the installation of a TGTU

Tesoro accepts the annual limit of 300 tpy. This reduction is equivalent to an 82% reduction from the permitted limit of 1637 tpy 502.

The limits as currently written do not indicate an effective date, and are based upon expected actual emissions following installation of RACT. Tesoro proposes the following language be added to this section to allow time for installation of control equipment:

"Combined emissions of 502 shall not exceed 3.1 tons per day (tpd) and 300 tons per rolling 12-month period by not later than January 1, 2019. "

Consistent with the General Requirements of Section H.1 1, Tesoro proposes the following language be added to this section:

> *"SO2 emissions caused by or attributable to the Startup, Shutdown, or Malfunction shall not be used in determining compliance with the daily limits. "*