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July 7, 2020

Nancy M. Baker Regional Permit Administrator New York State Department of Environmental Conservation Division of Environmental Permits, Region 4 1130 North Westcott Road Schenectady, NY 12306-2014

> RE: Response to Request for Additional Information (RFAI) Global Companies, Albany Terminal Air Title V Application DEC #4-0101-00112/00029 City of Albany, Albany County

Dear Ms. Baker:

I am submitting this letter on behalf of Global Companies LLC (Global) in response to your May 19, 2020 letter requesting additional information in support of Global's application to renew and modify its existing Air Title V application for its Albany Terminal, submitted in March 2020. For your convenience, we have duplicated the text from your letter and provided our response to your request. Note that we have not included those items that do not require a response from Global.

General:

1. The text should be clarified to indicate how many boilers and heaters will be installed, and where. The Lube Oil Building and tracing lines for pumping throughout the system should be labeled, as should other relevant buildings and structures, the rail yard for staging of trains and loading areas.

Response: Global is proposing to install additional heaters/boilers as follows:

- One 4 mmBtu/hr and one 6 mmBtu/hr heater to be housed in an existing building located in the southwest corner of the site adjacent to Tank 32. These heaters will be used to provide heat to Tanks 30 and 33, which will be used to store biodiesel.
- Four 9.9 mmBtu/hr boilers to be housed in the existing Lube Oil Building located adjacent to the rail loading rack. These boilers will be used to provide heat to the rail cars needed to facilitate the offloading of biodiesel.
- One 4 mmBtu/hr heater to be housed in an existing building located in the central/eastern portion of the site in the vicinity of Tank A65. This heater will be used to heat trace the line to the dock.

The Lube Oil Building, tracing lines for pumping throughout the system, the proposed heaters, the rail yard for staging of trains, loading areas, and other relevant buildings and structures

have been added to Diagram #1, Port of Albany Terminal, a copy of which is included as Attachment RFAI-A. This figure replaces Attachment B, Site Plan, in the EAF Supplement.

2. Please label the rail loading zone on the plans. **Response:** See response to Item 1 above.

Environmental Justice

 The Department's Office of Environmental Justice has reviewed the modified proposal for conducting Environmental Justice outreach during the COVID crisis which is dated May 1, 2020. Please include this modification in the Public Participation Plan. The next public participation meeting can be scheduled in accordance with the modified plan. Please copy the Department on mailings, and please also consider social media outlets in addition to the methods listed to get the word out about meetings (twitter, facebook, etc.).

Response: Global has revised its Public Participation Plan (PPP) to incorporate its proposal to address public outreach during the COVID crisis as Appendix D to the PPP with appropriate references to the Appendix added to the body of the PPP. A copy of the revised PPP is included as Attachment RFAI-B. Consistent with its commitment in the PPP, Global will provide copies of all stakeholder mailings to the individuals at DEC included on the Project's stakeholder list. As Global continues its outreach efforts, it will work with its Community Liaison and others to identify additional avenues for informing the public about upcoming meetings.

Water Usage

The application shows an increase in water use of 300 gpd, which will not be from a municipal source. Where is the water coming from, and what is its intended use.

Response: The application was incorrect. The 300 gpd increase in water will come from the City of Albany. The water will be used as boiler feed.

Climate Change

Section 7(2) of the 2019 Climate Leadership and Community Protection Act, Chapter 106 of the Laws of 2019 (CLCPA) requires all state agencies in considering permits and other decisions to consider whether such decisions are inconsistent with or will interfere with the achievement of the Statewide greenhouse gas (GHG) emission limits established in article 75 of the ECL. These GHG emission limits require a 40 percent reduction from 1990 levels by 2030, and an 85 percent reduction by 2050. ECL § 75-0107(1). Moreover, as set forth in the CLCPA, the Statewide GHG emissions include emissions of GHGs from sources within the State, as well as GHGs "produced outside of the State associated with either the generation of electricity imported into the State or the extraction and transmission of fossil fuels imported into the State." ECL § 75-0101(13). Therefore, please identify and explain whether the project will be consistent or inconsistent with the statutory Statewide GHG emission limits, including by taking into account GHG emissions from the facility itself, as well as both upstream and downstream indirect GHG emissions associated with the facility.

Response:

Introduction

In the RFAI, DEC is seeking feedback concerning the consistency of the Global Project with the goals of the CLCPA. As set forth in greater detail below, The Project calls for installing equipment needed to manage biodiesel, which is a crucial alternative for transitioning away from fossil fuels and is required by New York law to be blended into heating oil sold downstate. The biodiesel proposed to be managed at the Terminal has lifecycle GHG emissions that are 50% below the petroleum fuel it replaces and thus is preferable from a climate change perspective. Although the equipment required to manage the biodiesel will emit some GHGs, this impact is more than outweighed by the benefits associated with promoting the use of biodiesel to help achieve the GHG emission reduction goals of the CLCPA. The remaining components of the Project will result collectively in a significant reduction in potential GHG emissions from the Terminal primarily attributable to a significant reduction in allowable throughput.

Role of Global Terminal in Petroleum Market

As a preliminary matter, to understand the implications of the CLCPA for the Terminal, it is important to understand the role the Terminal plays in the fossil fuel supply chain. Typically, Global acquires and/or manages product delivered to the Terminal in one of two ways. First, Global purchases product and then sells it to customers who market it at retail. Under this scenario, Global effectively functions as a wholesaler, purchasing product in bulk and selling it in smaller quantities to companies such as home heating oil dealers or gasoline stations for sale to the public. In addition, Global is retained by other companies to handle their petroleum products. Under this scenario, the product is owned by a third party and Global is simply storing and distributing it in accordance with the customer's wishes.

The Global Terminal's role in the fossil fuel supply chain thus focuses on ensuring that fossil fuel products extracted and processed by third parties are properly stored and then distributed to wholesalers and retailers for eventual sale to the public. Global is not responsible either for producing fossil fuel products (e.g., extraction/refining) or for combusting the product it stores and distributes—both activities that result in direct emissions of quantities of GHGs. Global's role in the fossil fuel supply chain is like that of a large-scale liquid distribution warehouse. We are simply a break bulk storage company. Global acquires its own products or manages products owned by third parties, stores them at its "warehouse" (i.e., the Terminal), "breaks bulk," and then distributes the products in smaller parcels from the Terminal to wholesalers and retailers. As part of these activities, Global also engages in some on-site fuel blending.¹

¹ In analyzing Global's climate change impacts for purposes of the CLCPA, it is important to distinguish the Terminal's role in fossil fuel storage and distribution from that of a pipeline in light of DEC's recent decision concerning the Transcontinental Gas Pipe Line Company's ("Transco") Northeast Supply Enhancement Project (hereinafter "Transco Project"). In its May 15, 2020 decision denying Transco's request for a water quality certification, DEC contended that the Transco Project was inconsistent with the State's efforts to transition away from fossil fuels, noting, among other things, it "could extend the amount of time that natural gas may be relied upon to produce energy, which could, in turn delay, frustrate or increase the cost of the necessary transition away from natural gas and other fossil fuels." Although both the Global and Transco projects involve fossil fuel distribution, that is where the similarity ends. The Transco Project calls for the investment of many millions of dollars on the construction of

Biodiesel Handling and Storage

As part of the Project, Global is proposing to install boilers/heaters to enable it to manage biodiesel. This portion of the Project is entirely consistent with and directly helps support federal and state climate change policy—including the GHG emission reduction mandate of the CLCPA—by facilitating the switch to biodiesel. As set forth in greater detail below, biodiesel has been identified as an important "transitional" fuel for climate change purposes. At the federal level, EPA's renewable fuel standard was enacted with the goal of increasing development of climate-friendly alternative fuels, including biodiesel, that have lifecycle GHG emissions that are significantly less than those associated with the petroleum fuels they replace. At the state and local level, New York has specifically mandated the addition of biodiesel to home heating oil in the downstate area in recognition of its climate change benefits. The Project thus is consistent with the goal of the CLCPA since it facilitates the transition away from fossil fuels.

Biodiesel Project Description

Biodiesel is a renewable, biodegradable fuel manufactured from vegetable oils, animal fats, or recycled restaurant grease. Like petroleum diesel, biodiesel is used to fuel compression-ignition engines. Although biodiesel can be combusted in its pure form, it is typically blended with petroleum diesel and used in a blended form.

Because most biodiesel in its pure form is comparatively viscous, it may solidify or become non-pumpable at the lower temperatures that are typically observed in the Northeast, requiring heating to return it to a pumpable state for loading and storage. To generate the necessary heat to manage biodiesel, Global is proposing as part of the Project to install natural gas-fired steam boilers and oil heaters to heat tanks, railcars and associated product lines. Global is also proposing to install heating coils in Tank 30 and authorize storage of heated biodiesel with a maximum storage temperature of 120° Fahrenheit in Tanks 30 and 33. The Project will enable Global to transfer biodiesel at the loading racks or create biodiesel blends within other distillate storage tanks at the facility. The tank cars arriving at the Terminal carrying biodiesel will be equipped with a jacket of noncontact piping located either on the outside of the railcar and/or coils within the cars. The railcar's noncontact piping will be attached to a hose upon arrival at the Terminal where steam will flow around the railcar through the jacket of piping similar to an old fashion home radiator. The heating will return the biodiesel to a pumpable state, enabling it to be pumped to Tanks 30 and 33, which will be similarly heated by circulating hot

entirely new, major fossil fuel distribution infrastructure. This type of major investment necessarily contemplates several decades of expanded fossil fuel use. Second, the Transco pipeline contemplates the expansion of markets for fossil fuel products at a time when the State is attempting to discourage their use. By comparison, the Global Project does not involve significant new investment in fossil fuel distribution infrastructure or an expansion in fuel markets. In fact, Global is proposing to *reduce* the allowable throughput at its Terminal by 27%. Also, the Project proposed by Global will enable the Terminal to manage biodiesel, an important option for transitioning away from fossil fuels. The Global Project thus will not "delay, frustrate or increase the cost of the necessary transition away from natural gas and other fossil fuels." To the contrary, the Project will reduce the amount of product the Terminal can manage while at the same enabling Global to better manage its operations as New York transitions away from fossil fuels in accordance with the mandate of the CLCPA.

oil through heating coils within the tanks. The boilers and heaters will *not* be used to heat crude oil or other products managed at the Terminal.

Federal Programs to Encourage Use of Biodiesel

As noted above, both the federal government and New York State have adopted laws and regulations designed to encourage the use of biodiesel in place of petroleum-based diesel in recognition of biodiesel's significant climate change benefits. At the federal level, Congress enacted the Renewable Fuel Standards (RFS) program with the goal of increasing the amount of fuel derived from plants and other similar materials—such as biodiesel—as a substitute for fossil fuels. *See* Clean Air Act § 211(o), 42 U.S.C.A. § 7545(o). In defining biodiesel for purposes of the RFS program, the law requires that the fuel achieve a 50% reduction in lifecycle GHG emissions when compared to the petroleum diesel it is intended to replace. Accordingly, authorizing Global to install the equipment needed to manage biodiesel is consistent with the CLCPA goal of reducing GHG emissions.

Under the RFS program, as amended, transportation fuel² must contain an increasing percentage of renewable fuel, advanced biofuel, biomass-based diesel, and cellulosic biofuel, with the standard for each fuel based on the lifecycle GHG reductions achieved by the fuel relative to comparable traditional fuels. With respect to renewable fuels generally, the law requires transportation fuels to contain at least 9.0 billion gallons of renewable fuels in 2008, rising to 36 billion gallons by 2022. Each year, EPA reviews the quantities of the four types of renewable fuels generated to determine whether the production goals are being met and to make adjustments consistent with the RFS statute and regulations as necessary. Fuels that meet the definition of a particular fuel count toward determining whether the obligated parties are achieving their renewable fuel volume requirements.

To implement the program, EPA has established a credit program under which renewable fuel producers must register with EPA and provide detailed information about the renewable fuel(s) produced to the agency. Once that information has been approved by EPA, the producer can generate Renewable Identification Numbers (RINs)—unique numbers assigned to every gallon or renewable fuel produced or imported into the United States. These RINs can then be transferred along with the renewable fuel batches they represent to refiners or importers or separated from the renewable fuel they represent and then sold.

As previously noted, in deciding whether a particular fuel qualifies as renewable fuel, advanced biofuel, biomass-based diesel, or cellulosic biofuel, EPA must conduct an analysis of the lifecycle GHG emissions associated with the fuel to determine whether it meets the threshold in the statute for the fuel type. Under the statute, the term "lifecycle greenhouse gas emissions" is defined as "the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel

² The term "transportation fuel" is defined in the statute as "fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except ocean-going vessels)." 42 U.S.C.A. § 7545(o)(1)(L). Although the focus of the program is on transportation fuel, the statute authorizes EPA to issue regulations that extend it to "additional renewable fuels"—a term that includes heating oil. 42 U.S.C.A. § 7545(o)(1)(A), 7545(o)(5)(E). EPA has exercised that authority and extended the RFS program to cover heating oil.

and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel by the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for the relative global warming potential." CAA § 211(o)(1), 42 U.S.C. § 7545(o)(1). To qualify generally as a "renewable fuel," fuels produced from new biorefineries must reduce lifecycle GHG emissions at least 20% when compared to the 2005 baseline average gasoline and diesel fuel they replace (with special rules for refineries in place or under construction when Congress enacted the RFS law). Other renewable fuels must meet the following, more stringent lifecycle GHG thresholds measured as a percent reduction from 2005 baseline gasoline or diesel fuel they replace: advanced biofuel, 50%; biomass-based diesel, 50%; and cellulosic biofuel, 60%.

Thus, to qualify as biomass-based diesel under the RFS program, the producer of the biodiesel must show that the fuel achieves a 50% reduction in lifecycle GHG emissions relative to the 2005 petroleum-based diesel it replaces. The lifecycle analysis considers direct and indirect upstream and downstream emissions associated with the generation, distribution and use of biodiesel. Projects designed to encourage the production, distribution and use of biodiesel thus are consistent with the goal of reducing GHG emissions set forth in the CLCPA.

More generally, the federal government has adopted numerous programs that provide incentives to help build and maintain a market for biodiesel fuel and vehicles. These programs are summarized on the Department of Energy's Alternative Fuels Data Center at: <u>https://afdc.energy.gov/fuels/laws/BIOD</u>. In establishing these programs, the federal government was motivated by various goals, including the desire to reduce GHG emissions by substituting biodiesel for petroleum-based diesel.

New York State Programs to Encourage Use of Biodiesel

Like the federal government, New York State also has adopted programs to encourage the production and use of biodiesel. In 2017, New York State enacted a law—codified at New York Environmental Conservation Law § 19-0327—that requires all heating oil sold for use in buildings in Nassau, Suffolk and Westchester Counties effective July 1, 2018 to contain at least 5% biodiesel. The state law followed a pair of laws adopted by New York City to require heating oil sold for use in buildings in the City to contain a specified quantity of biodiesel. The original law required heating oil to contain at least 2% biodiesel beginning in 2012. In 2016, the City enacted a law increasing the amount of biodiesel in heating oil in the City to at least 5% on October 1, 2017. The blend then moves to 10% in 2026, 15% in 2030, and 20% in 2034. New York City Admin. Code § 24-168.1

GHG Emissions from the Terminal/Project

As previously noted, biodiesel is comparatively viscous. To manage biodiesel at the Terminal, Global must install equipment to heat the fuel to make it more "pumpable." As part of the Project, Global therefore is proposing to install natural gas-fired boilers and heaters to heat biodiesel. Potential CO₂ emissions from this new equipment are estimated at 27,784 tpy assuming the units are operating 8,760 hours per year. In fact, however, the boilers/heaters are expected to operate no more than approximately 25% of the time (up to approximately 2,200 hours per year). The boilers are not expected to operate as often in the summer as in the colder

months. This results in an expected actual increase in GHG emissions of approximately 6,950 tpy.³

To provide some context for this number, as discussed in the EAF Supplement, under EPA's Prevention of Significant Deterioration (PSD) program—the attainment equivalent of the nonattainment New Source Review program—EPA adopted special tailored applicability thresholds for new and modified sources of GHGs after concluding that the statutory thresholds for other pollutants were so low that they would result in an unmanageable expansion of the PSD program if applied to GHGs. 75 Fed. Reg. 31514 (June 3, 2010). Although the rule was eventually vacated by the U.S. Supreme Court,⁴ it provides a useful basis for assessing the significance of GHG emissions. The so-called "GHG tailoring rule" established a 100,000 tpy major source threshold for GHG emissions measured in CO₂ equivalent, while the significant modification threshold was 75,000 tpy CO₂ equivalent. Facilities/projects with emissions below these thresholds did not trigger PSD for GHGs. As previously noted, GHG emissions from the Project are estimated at only 6,950 tpy, significantly below the 75,000 tpy significance threshold established by EPA under the GHG tailoring rule for modifications.

CLCPA Consistency Assessment

Global is in the business of delivering energy that is needed for daily life. Global recognizes both the ongoing and critical need for energy, and the need to move toward a future with increased renewables. Global is an active participant in the transition to renewable fuels. Nowhere is that more apparent than in Albany, with the proposal to manage biodiesel.

As previously noted, the biodiesel portion of the Project is consistent with the GHG emission reduction goals of the CLCPA because it will enable the Terminal to handle biodiesel—a comparatively climate-friendly fuel. As discussed above, both EPA and New York State have enacted measures designed to encourage the production and use of biodiesel as a replacement for petroleum-based diesel fuel. Of particular note, the RFS program establishes annual production goals for biomass-based diesel for the specific purposes of encouraging production of this fuel. To qualify as biomass-based diesel under the program, the producer of the biodiesel must demonstrate that the fuel's lifecycle GHG emissions are at least 50% less than its petroleum-based counterpart. In other words, biodiesel regulated under the RFS program generates 50% less GHGs than regular petroleum diesel. The RFS program reflects a desire by EPA to encourage production of biomass-based diesel for the purpose of reducing GHG emissions and addressing the problem of climate change.

³ Note that these GHG estimates vary slightly from what was in the EAF Supplement as boiler and heater capacities have since been finalized.

⁴ The Supreme Court in *Utility Air Regulatory Group v. EPA*, 134 S. Ct. 2427 (2014) concluded that while GHGs may properly be considered pollutants for purposes of the Clean Air Act, EPA was not barred from interpreting the term within its statutory context and excluding atypical pollutants, such as GHGs, that are emitted in such large quantities that their inclusion would make the Act unworkable. The court went on to find that including GHGs under the PSD program was unreasonable both because it would place a huge administrative burden on permitting agencies and because it triggered a transformative expansion of EPA's regulatory authority without clear congressional authorization. The decision thus was based on a finding that GHGs (in particular, CO_2) are emitted in significantly larger quantities than other pollutants and must be evaluated accordingly.

At the state/local level both the New York State legislature and New York City have adopted laws mandating the addition of biodiesel to home heating oil. Like the RFS program, these laws reflect a determination that biodiesel is preferable to its petroleum-based counterpart from a climate change perspective.

Accordingly, while the on-site management of biodiesel at the Terminal will result in emissions of GHGs, the adverse impacts of these additional emissions from a climate change perspective are more than outweighed by the benefits associated with facilitating the use of biodiesel in the State. Accordingly, the Project is consistent with the goals of the CLCPA.

Throughput Reductions

As part of the Project, Global is proposing to reduce the overall allowable throughput at the Terminal 27% from 3,329 million gallons to 2,379 million gallons, a 950 million gallon decrease. In particular, the Project calls for Global to reduce its existing cap on crude oil throughput by over 75%, from 1,850 million gallons to 450 million gallons, while increasing the cap on loading refined products by 450 million gallons.

From a climate change perspective, these changes represent a significant reduction in the total quantity of fossil fuels that can potentially be managed by the Terminal and thus the quantity of potential GHG emissions associated with those on-site management activities. From a broader perspective, reducing the quantity of product allowed to be managed at the Terminal decreases the amount of product Global can potentially distribute to customers. In essence, Global will no longer be associated in any way with the lifecycle GHG emissions associated with up to 950 million gallons of petroleum products. While the product may still be produced (generating GHG emissions associated with extraction and refining) and combusted, the Terminal will not play a role in that process.

Other Project Components

As set forth in the EAF Supplement, Global is proposing several other changes at the Terminal designed to improve Terminal operation and enhance the ability of Global to respond to changes in the market for its products.

Reconfiguration of Throughput Caps

As part of the Project, Global is proposing to reconfigure its throughput caps to allow for greater flexibility to respond to market changes. Currently, loading of gasoline and ethanol at the Terminal is capped at each of three loading areas: the truck loading rack, the rail loading rack, and the marine dock. Loading of distillate products (including diesel fuel, heating oil and kerosene) is capped on a facility-wide basis. The Project includes the addition of a facility-wide cap that incorporates all refined products (including gasoline, ethanol, distillates, blendstocks, and biodiesel) as well as a reconfiguration of the existing sub-caps at each of the loading areas. This reconfiguration of the caps will allow flexibility in the type and volume of products distributed at the individual loading areas to adjust to changing market conditions, while ensuring against major changes in truck or rail traffic. (See Section 2.3 of the EAF Supplement for a detailed discussion of the changes to the throughput caps at the Terminal.) The reconfiguration of the throughput caps is not expected to impact the Terminal's potential

GHG emissions. Moreover, as set forth above, Global is lowering the allowable Terminal throughput by 950 million gallons, a significant reduction.

Loading Rack Modifications

Global is proposing to add loading positions to its truck and rail racks to reduce wait times at the truck rack and the need to move railcars during loading. Currently, the truck loading rack is equipped with eight loading positions. Operation of the truck loading rack can become congested and is constrained during daily busy periods. The Project includes the addition of two loading positions to the truck loading rack to improve efficiency and reduce customer wait time and truck idling time.

The rail loading rack is currently equipped with eight loading positions. Since the rail loading area can accommodate up to fifteen railcars, loading all fifteen cars can require a locomotive to move the loaded cars out of the loading positions and move the empty cars into position. To improve efficiency and reduce locomotive use, the Project includes the addition of seven loading positions at the rail loading rack. The additional loading positions are not designed to increase the loading rate at the rack but will allow railcars to be loaded more efficiently and eliminate the need for interim movement of railcars to load certain trains.

The addition of new truck loading positions will not increase the overall amount of gasoline that can be throughput at the rack (which is capped as set forth above at current levels). However, the additional loading positions will enable Global to eliminate bottlenecks at the truck loading rack that occur at certain times of the day. This will decrease the amount of truck idling at the Terminal. Likewise, the addition of loading positions at the rail loading rack will allow Global to load a train more quickly while reducing the amount of movement required to situate the cars being loaded. This reduces the amount of time locomotives must be operated during the loading process.

Enhanced Air Emission Controls

Global is proposing to install a vacuum enhanced control system at the rail loading rack to ensure negative pressure loading, a change which will significantly reduce, if not eliminate, fugitive emissions from rail loading. While this change may increase GHG emissions by increasing the quantity of vapor combusted by the VCU, the increase is more than justified by the benefit to the community of reducing fugitive VOC emissions from the rail loading rack.

CLCPA Consistency Assessment

The throughput reduction/operational flexibility component of the Project is "consistent with the statutory statewide GHG emission limits" set forth in the CLCPA. The Project will reduce allowable throughput at the Terminal by 950 million gallons or approximately 27% from current allowable levels. This represents a reduction in potential emissions at the Terminal associated with management of product onsite. More broadly, the reduction means that the Global Terminal will no longer be involved in the management of 950 million gallons of petroleum and related products. The remaining components of the Project (reconfiguration of throughput caps, addition of loading positions, and enhanced air pollution controls) will collectively have little impact on potential GHG emissions at the Terminal.

Overall, these components of the Project are consistent with the goals of the CLCPA. The Project reduces the total quantity of petroleum and related products that can be managed at the Terminal and will replace a percentage of petroleum fuel with biodiesel and thus is consistent with the CLCPA goal of transitioning away from fossil fuels. The remaining changes are designed to reduce emissions and/or improve the efficiency of the Terminal's operations. Overall, these changes will reduce potential GHG emissions at the Terminal. Equally important, these changes will enable the Terminal to better adapt to market changes. New York is currently in the early stages of implementing the CLCPA. In the next 10 years, the market for fossil fuels in the State is likely to shift dramatically as measures to achieve the CLCPA goals are adopted. By reconfiguring the Terminal to allow Global to easily transition from one type of product to another, the Project will allow the Terminal to more efficiently respond to changes in the market, including the shift to more climate-friendly fuels.

Conclusion

As set forth in greater detail above, the proposed Project is consistent with the goals of the CLCPA. For a modest investment, the Project will: (1) reduce potential product throughput at the Terminal; (2) enable the Terminal to manage biodiesel, an important climate-friendly substitute for petroleum diesel as the State transitions away from fossil fuels; and (3) enhance the Terminal's ability to respond to changes during the transition toward a reduced carbon economy contemplated by the CLCPA.

Community Risk and Resiliency Act (CRRA)

Section 9 of the 2019 CLCPA added a new Section 17-b to the Community Risk and Resiliency Act, which provides that major permits for certain regulatory programs (including air) "shall require applicants to demonstrate that future physical climate risk has been considered." In reviewing such information, DEC has the authority require the applicant to "mitigate significant risks to public infrastructure and/or services, private property not owned by the applicant, adverse impacts to disadvantaged communities, and/or natural resources in the vicinity of the project." . . Please clarify the discussion on pages 53 and 54 of the EAF is in consideration of future climate risk as required by Section 17-b of the Community Risk and Resiliency Act, as enacted by Section 9 of the CLCPA.

Response: The discussion on pages 53 and 54 of the EAF Supplement was in consideration of future climate risk as required by Section 17-b of the CRRA, as enacted by Section 9 of the CLCPA. As discussed in Section 12.2 of Global's EAF Supplement, based on the most recent Federal Emergency Management Agency (FEMA) map of the Terminal site (Map No. 36001CO194D, Effective March 16, 2015), the majority of the Terminal site is located within the 100-year floodplain of the Hudson River. For purposes of the CRRA regulations set forth at 6 NYCRR Part 490 identifying sea level rise potentials, the City of Albany (including the Terminal location) is in the Mid-Hudson Region.

Section 9 of the 2019 CLCPA requires applicants "to demonstrate that future physical climate risk has been considered" in conjunction with the particular project under review. With respect to the Project, the only additional physical risk from a climate change perspective is the increased risk of flooding attributable to climate change-related sea level rise. However, the

additional risk to the Project posed by flooding is limited to the destruction of the Projectrelated equipment. As discussed in the EAF Supplement, Global is proposing to install several exempt boilers and heaters to manage biodiesel, as well as additional loading positions at the truck and rail racks. This additional equipment will be located within the existing Terminal footprint and will be protected to the same extent as comparable equipment already in place. Moreover, all of the new heating equipment will be located inside existing buildings providing further protection against flooding. Equipment containing oil, such as small process tanks associated with the hot oil heating systems will be installed in accordance with major oil storage facility (MOSF) requirements for tanks within floodplains, as applicable.

With respect to flood risks, the Project does not call for the placement of fill or other encroachments into floodways or floodplains. It also does not call for any other changes to the configuration of the property that could raise base flood elevations or otherwise impact the potential path of floodwaters. Accordingly, the Project will not change the flooding-related risk to the Terminal or to any nearby properties.

In light of the above, the only potential climate-change risk associated with the Project is a financial one. In the event sea level rise increases the risk of flooding, Global faces an increased risk that the equipment installed as part of the Project will be damaged or destroyed. No other climate-related risks to the Project are anticipated.

No measures are required to "mitigate significant risks" identified in Section 17-b of the CRRA as follows.

- *Risks to public infrastructure and/or services.* The Project will not affect public infrastructure and/or services.
- *Risks to private property not owned by the applicant.* The Project will not affect private property not owned by Global.
- Adverse impacts to disadvantaged communities. The Project will not pose a "significant risk" to disadvantaged communities. As set forth in the Section 14.0 of the EAF Supplement, the Terminal is located in an industrial area near several environmental justice communities. The EAF and accompanying EAF Supplement show that the Project will not have an adverse impact on these communities, let alone pose "significant risks" relating to climate change that could potentially require mitigation. As previously noted, to ensure the communities adjoining the Terminal are provided with opportunities to learn about and comment on the Project, Global has prepared a comprehensive PPP to facilitate community outreach. This outreach should help ensure that possible adverse impacts to disadvantaged communities are identified and addressed.
- *Natural resources in the vicinity of the project.* As discussed in Section 8.0 of the EAF Supplement, the Project will be located at an existing industrial facility that has been in continuous operation since at least the 1920s. The area in the vicinity of the Project likewise has been urban/industrial for many decades. As a result, there are few natural resources at or near the site of the Project other than the Hudson River. Construction and operation of the Project will not affect the Hudson River. It also will not require the removal or destruction of on-shore vegetation or fauna or otherwise impact any

significant habitat areas or other natural resources. Accordingly, no mitigation is required to address natural resource impacts.

Truck Traffic:

1. Based on the application, the truck rack could have a potential of a combined 879,300,000 gallons per year (round up to 880,000,000 gallons per year for the sub-cap). It appears that truck traffic may increase due to rounding. Please clarify whether truck traffic will increase, or will remain the same (or less) with this proposal.

Response: Potential truck traffic will remain the same with this proposal. Global will seek a subcap of 879,300,000, which reflects the sum of the existing throughput caps at the Terminal truck rack. This cap will ensure that potential truck traffic at the Terminal cannot exceed current permitted levels despite the changes contemplated by Global's operational flexibility proposal. The 880,000,000 gallon per year cap was the result of rounding but has been revised to the original number.

Air Application Technical Review:

1. Provide backup and justification for Project Emission Potential Calculations. Limits utilized, key emission factors, and basis of calculations description.

Response: Additional notes and descriptions have been added to a revised Project Emission Potential (PEP), included as Attachment RFAI-C. As described in Note 1 on Page 1 of the PEP, the 1.9283 billion gallons of refined product is distributed across all internal floating roof (IFR) tanks as Conventional Gasoline to determine working losses from gasoline throughput. In addition, 506.54 million gallons of blendstock/component is distributed across the previously permitted blending project IFR tanks to calculate working losses. This throughput was the previously permitted tank throughput from the blending project. These working losses are in addition to the gasoline working losses, even though the throughputs are not additive. This was done to ensure a conservative emissions estimate. The crude oil throughput of 450 million gallons was distributed across all IFR tanks and included in the working losses. Crude oil has a separate throughput limit in the permit.

Standing losses from all IFR tanks were assumed to be gasoline or blendstock/component. For example, if the tank is permitted for blendstock, the standing losses were calculated as blendstock. If the tank is permitted for other refined products or crude, the standing losses were calculated as gasoline. Emissions are highest for blendstock due to the assumption that it has a Reid vapor pressure (RVP) of 15 psi all year. Gasoline was assumed to have an annual average RVP of 13 psi. Both result in higher standing losses than crude oil, which was assumed to have an annual average RVP of 12.5 psi. All distillate tanks (non-IFR) were calculated with distillate standing losses. Working losses are not considered for distillate tanks because it is more conservative to assume the entire 1.9283 billion gallons of refined product is gasoline.

As described in Note 2 on Page 1 of the PEP, the 1.9283 billion gallon throughput limit of refined project was included in the PEP. The total throughput was modeled as follows:

- 879.3 million gallons of conventional gasoline or lower RVP product at the truck loading rack loaded under negative pressure (i.e., with a "vac assist") and the vapor recovery unit (VRU) at 2 mg/L;
- 300 million gallons of conventional gasoline or lower RVP product at the rail loading rack with a vac assist and the vapor combustion unit (VCU) at 2 mg/L;
- 380 million gallons of blendstock at the marine loading dock with a vac assist and the VCU at 2 mg/L; and
- The remaining 369 million gallons of conventional gasoline or lower RVP product (1,9283-879.3-300-380) at the marine loading dock with a vac assist and the VCU at 2 mg/L.

Although up to 900 million gallons of refined product may be loaded at the marine dock, the PEP scenario described above maximizes throughput at the truck rack first because the truck rack has the lowest baseline emissions, thus maximizing the PEP. The next lowest baseline was the rail rack followed by the marine dock. This reasoning provides for a conservative approach since it minimizes the benefit of the baseline emissions and therefore maximizes the PEP.

Throughput totals have been added to the PEP for additional clarity. References to calculations have also been added and the calculations include references to emissions factors and the basis of calculations. See Attachment RFAI-C for details.

2. Please provide justification of Bakken Crude emissions factor utilized in calculations for marine loading, vapor pressure curve, lab test results and any other relevant information.

Response: A Bakken Crude emissions factor was not needed for calculating emissions for marine loading. First, there will be no fugitive emissions from the marine loading under normal loading because of the vac assist. Second, potential to emit (PTE) calculations were based on the permitted rating of the control device of 2 mg/L. Under these circumstances, no emission factor for Bakken Crude is necessary. Calculations are shown on Page 21 of the revised PTE calculations included as Attachment RFAI-D. The formula in the PTE is from AP-42 and uses a vapor pressure of 12.5 psi for Bakken Crude. However, while the emissions factor is calculated and shown, it is not used in the PTE since there are no fugitive emissions.

Emissions from loading without the vac assist system (when loading inerted vessels) were calculated assuming gasoline, which is more conservative, in order to simplify the ratios used for the proposed permit conditions. This is further discussed in response to Question 3 below.

3. Please provide justification for alternative operating scenario formula for inerted vessels, truck, rail loading if vapor assist system is not utilized or is offline.

Response: Ratios were used to determine the throughput equivalents for the alternate operating scenarios. Pages from the PTE have been highlighted and annotated to illustrate how the ratios were calculated. An example scenario using the formula has also been included. See Attachment RFAI-E for details.

In order to minimize the number of ratios in the permit, and to be conservative, the gasoline ratio of 0.81 was used for crude marine loading of inerted vessels since the emission factor for gasoline is higher than the emission factor for Bakken crude. Therefore, the Bakken crude emission factor was not used in the calculations, as discussed in the response to Comment 2.

4. Provide justification of tank calculations to include possible between tank transfers not captured by current PTE.

Response: Tank to tank transfers are accounted for in the current PTE. The total tank throughput is 2,885,540,000 gallons. This includes 1,929,000,000 gallons of refined product plus 506,540,000 gallons of blendstock plus 450,000,000 gallons of crude oil. The 1,929,000,000 is a rounded refined throughput limit through the Terminal (actual number is 1,928,300,000). The tank throughput of 2,885,540,000 gallons is approximately 21% more than the total permitted rack throughput at the Terminal (2,378,300,000 gallons). Tank throughputs are detailed on Pages 5 and 7 of the Terminal PTE (Attachment RFAI-D) for clarity.

5. There appears to be a discrepancy with truck loading of 650,000,000 gallons per year and 229,300,000 gallons per year = 879,300,000 gallons per year vs 880,000,000 gallons per year. Please clarify.

Response: Global was originally proposing to round the 879,300,000 gallons per year throughput to 880,000,000 gallons per year. However in order to keep potential truck traffic at the currently permitted levels, Global is proposing to keep the sub-cap at 879,300,000. Revised relevant pages from the permit application are included as Attachment RFAI-F.

6. There appear to be issues with the emission cap formula defined in conditions. VOC and HAP cap emission spreadsheets should be developed with ongoing discussion between the facility and Department. The Department also plans to use facility throughput caps and sub caps in conjunction with overall throughput limits.

Response:

Global is uncertain as to what the issue is that is referenced in this comment. There was no emission formula proposed, but rather a throughput formula for alternate operating scenarios. HAP conditions were included in the permit application. A total VOC cap has been proposed as a response to this comment. The proposed VOC capping condition is included as Attachment RFAI-G.

As discussed in the response to Item 3 above, annotated pages from the PTE illustrating how the equivalent throughput formula was developed are included as Attachment RFAI-E along with example calculations.

7. Page number should be inserted on all pages of application for easier discussion points (ex. Pg 1 of X).

Response: Page numbers have been added to the application pages for clarity. The new Application pages are included as Attachment RFAI-H.

8. Use 11" x 17" paper for those sheets that have small font sizes would be helpful for reading.

Response: Calculation pages have been provided on 11"x17" paper for clarity.

9. Please incorporate minor modifications with differing colors to indicate changes in the current 2012 issued permit. Please redline the current pending renewal / modification Department for clarity purposes.

Response: Minor modifications that have been processed since the last permit have been added to the annotated permit, with the exception of the remediation system minor modification from 2015, as there was no existing language pertaining to the system in the current permit. The minor modifications are annotated in a different color for each minor modification. The revised annotated permit is included as attachment RFAI-I.

Many thanks for your attention to this matter. If you have any questions, or require any further information, please do not hesitate to call or email.

Very truly yours,

Than L. Kl

Tom Keefe VP, EHS

Enclosures





ALBANY TERMINAL Public Participation Plan

June 1, 2020

Albany Terminal Public Participation Plan Table of Contents

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- D. Virtual Engagement Plan

Albany Terminal Public Participation Plan

1. Purpose of this Document

Global Companies LLC is proposing changes to its petroleum terminal in Albany's South End neighborhood (the "Terminal"). These changes will be detailed in a proposed air permit renewal modification application that Global will submit to the New York State Department of Environmental Conservation (NYSDEC).

The purpose of this document is to outline a program for ensuring that members of the community receive information about the proposed changes and are provided opportunities to participate in the NYSDEC's review of those changes under New York's Title V air permitting program. In this plan, "community" refers to residents/neighborhood groups who are near or adjacent to the Terminal (a community generally known as the South End). Additional stakeholders are identified in Section 8 below.

2. Background

Global's Albany Terminal is located at 50 Church Street in the City of Albany. The Albany Terminal is a bulk petroleum storage and transfer facility adjacent to the Port of Albany along the Hudson River. The Terminal consists of aboveground petroleum storage tanks as well as truck, rail and marine loading facilities. Global has owned the Terminal since 2007. The facility was established at its current location in the 1920s.

The Albany Terminal is served by the Canadian Pacific (CP) railroad. CP owns and operates the Kenwood Yard where rail cars serving Global and the Port of Albany enter and leave.

A map showing the location of the Albany Terminal and its key components is included in Appendix A.

Global's Albany Terminal receives, stores and distributes petroleum and related products to customers in the Capital District and beyond and is a critical piece of the Northeast's energy infrastructure. Global handles a wide variety of products at the Terminal, including gasoline, diesel fuel, home heating oil, kerosene, crude oil and renewable fuels such as ethanol and biodiesel.

Products are delivered to the Terminal by barge and rail, and transferred into one of the various tanks at the facility. The products are then pumped from the tanks into trucks, rail cars or ships/barges for delivery to customers.

3. Proposed Operational Changes

Global's Albany Terminal operates under a Title V air permit from the NYSDEC. In March 2020, Global plans to submit a permit renewal modification application to the NYSDEC. It will include some changes that have been influenced by previous community input.

Key changes in the renewal modification application would:

- decrease the amount of crude oil allowed to be shipped through the Terminal by over 75%, a reduction of 1.4 billion gallons;
- increase Global's capabilities to handle biodiesel at the Terminal to help meet New York's renewable energy requirements and greenhouse gas reduction initiatives;
 - Natural gas-fired boilers would be installed to receive, store, and ship biodiesel, a renewable fuel. No other products will be heated;
 - The proposal specifically prohibits the use of boilers to heat crude oil;
- install enhanced controls to more effectively treat emissions from loading operations;
- add flexibility to respond to changes in the market and improve service to our customers by eliminating product-specific throughput caps and subjecting refined products to a single facility-wide cap that allows Global to switch products among loading racks.
- add more positions at the truck loading rack to reduce customer wait time and truck idling time; and,
- add more positions at the rail loading rack to improve efficiency and reduce locomotive use when loading trains.

4. Public Participation Goals

The goals of this public participation plan are to:

- Establish avenues for members of the South End community and other stakeholders to learn about the planned changes at the Terminal and provide input.
- Create opportunities that foster open and effective dialogue with stakeholders.
- Build relationships with community members and other stakeholders.
- Provide forums to hear and respond to concerns.
- Identify any actions that minimize impacts on the community and the environment.

Global is committed to being an active and engaged member of the community.

- Global employees, including executives, have begun meeting with community leaders and neighbors on a regular basis.
- Global maintains a website on the Albany Terminal, <u>https://globalalbany.com/</u>, to provide information to the community. The site will be updated as part of this public participation effort.

- In August 2019, Global hired a full-time community liaison for the company with more than 35 years of community involvement experience in Albany.
- Global also supports K-12 education and recreation programs, community organizations, and public safety programs in Albany.

Examples of past public participation efforts and community support are included in Appendix B.

5. Regulatory Review Process

Global's Albany Terminal is currently subject to a Title V air permit issued by the NYSDEC under 6 NYCRR Part 201. Operations at the Terminal must comply with the conditions outlined in the permit.

The proposed changes at the Terminal require Global to modify its existing Title V permit. The NYSDEC will review the application and conduct a public review process in accordance with the procedures and standards established by NYSDEC under 6 NYCRR Part 201 (air permitting) and Part 621 (uniform permitting procedures).

In addition to the proposed permit renewal modification application, Global will also prepare an Environmental Assessment Form (EAF) required under the State Environmental Quality Review Act (SEQRA), 6 NYCRR Part 617. The EAF will assess whether there are potential significant environmental impacts relating to the proposed changes, including, but not limited to, noise, truck traffic, visual impacts, odors, and greenhouse gas emissions, including the implications of the recently enacted Climate Leadership and Community Protection Act. NYSDEC will review the EAF at the same time it reviews the Title V air permit renewal modification. Notice of the proposed Title V air permit modification will be published in the NYSDEC's Environmental Notice Bulletin as well as in a local newspaper(s). A minimum 30-day public notice and comment period will be provided. Copies of the application, including the EAF, will be made available at the document repositories identified in Section 9 below.

6. Public Participation Process

To continue its ongoing efforts to involve the community and to ensure the community is informed about the proposed changes to the Global Terminal and has ample opportunity to provide input, Global will implement this Public Participation Plan.

The key steps Global has taken or will take under the Plan are:

- identifying community members and other stakeholders;
- identifying community concerns;
- developing and distributing written information about the proposed changes and the review process;
- establishing a Community Liaison representative;
- opening an Albany Community Outreach Office and maintaining open office hours;

- meeting with neighborhood residents and tenants association members on a regular basis;
- providing updates to elected officials (City and County of Albany, State of New York) on a regular basis;
- holding a public information meeting or meetings to keep the public informed about the proposed changes and the review process;
- including event updates in Albany Housing Authority's monthly mailings;
- establishing easily accessible document repositories in the adjoining neighborhood(s);
- maintaining an updated website; and
- reporting periodically on progress toward implementing this plan, including certifying final compliance.

In light of COVID-19 and restrictions on public meetings, Global has put together a Virtual Engagement Plan, which can be found in Appendix D. This plan will replace the public meeting. As needed, we will continue to update the PPP and the Virtual Engagement Plan.

7. Identifying Stakeholders

Stakeholders include community members — residents/neighborhood groups who are near or adjacent to the Terminal — as well as others who have a potential stake in the proposed operational changes. This includes people who have expressed an interest in the proposed changes by attending public meetings, writing or calling; neighborhood religious establishments and other organizations; and elected officials who live in and/or represent the community of concern.

A list of stakeholders, with available contact information, is included in Appendix C. The portion of the list containing the names of individual residents has been omitted to preserve their privacy. The stakeholder list includes:

- Residents and neighborhood groups near the Terminal
 - Ezra Prentice Homes Tenants Association
 - Residents of Steamboat Square
 - Residents of the Mount Hope neighborhood and the South End generally
 - South End Neighborhood Association
- Community, civic, environmental and business leaders and organizations
 - Executive Director, Avillage
 - Dominick Casolaro, former Albany Common Council representative, Ward 1
 - Alice Green, Executive Director, Center for Law & Justice
 - Steve Longo, Executive Director, Albany Housing Authority
 - Sergeant (Ret.) Leonard Ricchiuti, Police Athletic League
 - Tim Doherty, Director of Operations, Boys and Girls Club of the Capital Area
 - Scott C. Jarzombek, Executive Director, Albany Public Library
 - Kevin Mitchell, President, Just Be Ready, Street Outreach Org.
 - Joanne Morton, President, South End Neighborhood Association

- Center for the Disabled
- Capital City Rescue Mission
- Salvation Army

• Schools and religious organizations

- Marc Johnson, Pastor, St. John's Church of God in Christ
- Jasmine Brown, Principal, Giffen Memorial Elementary School
- Amanda Boyd, Teacher, Giffen Memorial Elementary School
- Mt. Calvary Baptist Church
- The Parish of St. John the Evangelist and St. Joseph

• Government and elected officials

City of Albany

- Kathy M. Sheehan, Mayor of Albany
- Corey Ellis, President, Albany Common Council
- Sonia Frederick, Albany Common Council, Ward 1
- Derek Johnson, Albany Common Council, Ward 2
- Kelly Kimbrough, Albany Common Council, Ward 4, President Pro Tempore
- Joseph Gregory, City of Albany Fire Chief
- Eric Hawkins, City of Albany Police Chief
- Dorcey Applyrs, Chief City Auditor

Port of Albany

- Georgette Steffens, Commission Chairperson, Albany Port District
- Rich Hendrick, General Manager, Port of Albany

Albany County

- Dan McCoy, Albany County Executive
- George Penn, Director of Operations, Albany County
- Elizabeth F. Whalen, Department of Health Commissioner
- Craig Apple, Albany County Sheriff
- Andrew Joyce, Chairman, Albany County Legislature
- Carolyn McLaughlin, Albany County Legislature, District 1
- Samuel Fein, Albany County Legislature, District 6

State of New York

- Senator Neil Breslin
- Assembly Member John McDonald
- Assembly Member Patricia Fahy
- Congressman Paul Tonko
- Basil Seggos, Commissioner, NYSDEC
- Tom Berkman, General Counsel, NYSDEC
- Rosa Mendez, Director, Office of Environmental Justice, NYSDEC

- Keith Goertz, Regional Director, Region 4, NYSDEC
- Nancy Baker, Regional Permit Administrator, Region 4, NYSDEC
- Jordan Gougler, Office of Environmental Justice

Global will add to the stakeholder list throughout the public participation and permit review process. Persons and organizations that include contact information on the sign-in sheet for the public meeting(s) or fill in the request for information form on Global's Project website will be added to the stakeholder list.

8. Communicating with Community Members and Other Stakeholders

Global will encourage public participation through the following activities:

a. Community Outreach

Global has hired a full-time Community Liaison representative to encourage and facilitate communication with community members and other stakeholders. The Community Liaison will lead or support the following efforts:

- Global is establishing an Albany Community Outreach Office in the community. The Outreach Office is one of several channels, along with other activities described in this plan, where community members and stakeholders may share concerns with Global, ask questions, and receive information.
- The Community Outreach Office will be open to the public on the following schedule:
 - o Tuesday, 11:00 am 2:00 pm.
 - o Wednesday, 11:00 am 2:00 pm. and 5:30 pm to 8:30 pm
 - Thursday, 11:00 am 2:00 pm.
 - Other times by appointment
- The Community Liaison representative will hold regular meetings with community members and tenants association members as desired by the community.
- The liaison will attend monthly Neighborhood Association meetings and activities, and will hold monthly planning meetings with community partners.
- Global will update elected officials (city, county and state) on a regular basis to share information and answer questions so that their constituencies have an open and ongoing communication channel.

b. Open House

Prior to submitting the permit renewal modification application, Global will hold an open house in the Ezra Prentice Community Room. The open house is scheduled for February 25, 2020. The open house will provide an informal opportunity for community members to learn about the Project and the proposed changes. The open house location is accessible for individuals with disabilities.

Notice of the open house was mailed or emailed to homes and apartments within the marked area identified in Figure 1, as well as the organizational and government stakeholders identified above. Flyers were posted in the community, including the Ezra Prentice community room. Notice of the meeting was also posted on the Project website. The notice to the community and identified stakeholders provided at least three weeks' notice of the event.

The notice includes a short description of why the public should attend, how they can participate, and contact information for any questions about the open house. A fact sheet about the Project is included in the notice. We have reviewed languages spoken in the area and have concluded that no outreach in a language other than English is necessary.



Figure 1: Direct mail notification area.

The location, date and time of the open house was set after consulting with community leaders, elected officials and other stakeholders.

Individuals who attend the open house and provide contact information on the sign-in sheet will be added to the stakeholder list and will receive further notices concerning the Project.

The direct mail with Notice of the Open House and Fact Sheet went out to 2,724 total addresses, including:

- 2,686 residential addresses including multi-family housing units, apartments, and houses in the vicinity of the terminal (see map 1B, letter distribution map).
- 38 from the Stakeholders List that are geographically outside of the letter distribution map area.
- Global will continue to add to the Stakeholder List and send all direct mail to this list moving forward.

c. Public Meeting

In addition to the open house, a public meeting will also be held within the first 30-60 days after the proposed permit renewal is submitted to the NYSDEC. The public meeting is an opportunity for members of the public to comment on the proposed air permit modification and to ask questions of Global. This meeting location will be accessible for individuals with disabilities.

The location, date and time of the public meeting will be set after consulting with community leaders, elected officials and other stakeholders.

A letter to the community and identified stakeholders will provide at least three weeks' notice of the meeting. Flyers will be posted in the community, including the Ezra Prentice community room. Notice of the meeting will also be posted on the Project website

Additional status/update meetings will be added as necessary to ensure the community and stakeholders are informed of any changes or new developments.

Based on the extent of public interest, NYSDEC may decide to conduct a formal hearing under 6 NYCRR Part 621 in addition to or in lieu of the public meeting once the modified Title V permit has been drafted and notice of the application has been published in the Environmental Notice Bulletin and in a local newspaper(s).

Please see Appendix D for our Virtual Engagement Plan.

d. Other Notifications

Global sent a letter to residents living near the Albany Terminal in June 2018 informing stakeholders that a permit modification application would be submitted. The letter was sent to homes and apartments in a roughly one-mile radius around the Terminal. See Appendix B for a copy of the letter and a map of the distribution area.

As previously noted, a notice to the community informing residents about the February 2020 open house was mailed in early February 2020. A similar letter will be mailed to residents before the public meeting.

In addition, notice of the proposed Title V air permit renewal modification will be published in the NYSDEC's Environmental Notice Bulletin and a local newspaper as required by 6 NYCRR Part 621.

e. Print Materials

Global has prepared a one-page, easy-to-read fact sheet describing the Project and proposed changes. The fact sheet was distributed to stakeholders in the notice announcing the open house and will be included in the notice for the public meeting. It will be posted on the Project website and included in the document repositories. The open house invitation and fact sheet is included in Appendix C.

f. Updated Website

Global will continue to update the Terminal website, <u>https://globalalbany.com/</u> to ensure it contains up-to-date information about the Project. The website will describe existing operations and the proposed changes, provide information about the Title V air permit review process, and offer regular status updates. Global anticipates that the website will include:

- Facility description
- Project description
- Summary of permitting requirements
- Links to key documents
- Facility contact information, including instructions on how to be added to the stakeholder list
- Address and hours of the Albany Community Outreach Office
- Addresses of local document repositories
- Dates/times/locations of public outreach events and key milestone dates

The site will be updated regularly before and during the permit review process.

g. Timing

Open House Notice/Fact Sheet Open House Public Meeting Notice* Public Meeting* **Expected date, subject to confirmation.* February 4 February 25 April/May TBD Spring TBD

A timetable for additional activities will be developed and shared with NYSDEC and the community as the Project proceeds.

9. Access to Information

All official reports and documents related to the permit modification application will be available for review in the following places.

• The Albany Housing Authority 200 South Pearl Street Albany, NY 12202 (518) 445-0744 www.albanyhousing.org

• Albany Public Library

John A. Howe Branch 105 Schuyler Street (intersection of Schuyler & Broad Streets) Albany, NY 12202 (518) 472-9485 www.albanypubliclibrary.org/locations/howe/

• The Global Albany Terminal website <u>https://globalalbany.com/</u>

• Albany Community Outreach Office

As previously noted, Global is in the process of establishing a Community Outreach Office. Key documents will be available at the office once it has been opened.

10. Progress Report

A progress report will be prepared updating this plan. The update will:

- outline substantive concerns raised and how they were resolved;
- identify any outstanding issues;
- identify components of the plan yet to be implemented; and
- propose an expected timeline for completion of the plan.

The update will be issued after the first public meeting.

An additional progress report may be prepared if there is extensive public comment concerning the Project, resulting in an expanded public comment period.

11. Final Public Participation Plan Report

A final report will be provided at the conclusion of the permit process documenting the public participation process for this permit modification application.

Appendix A Albany Terminal Map



Appendix B Past Public Outreach Efforts

Global is committed to working with community members and stakeholders to ensure everyone's voice is heard. Notable government and community outreach efforts undertaken in recent years include the following:

- In June 2018, Global sent a letter to community members updating them on the permit modification status. The letter was mailed to all residential addresses in a roughly one-mile radius round the Terminal, as shown in Figure 1B. A copy of the letter follows below.
- In November 2019, Global conducted a tour of the Terminal for local political leaders and others to familiarize them with Terminal operations. More generally, in recent years, Global representatives have met on multiple occasions with political and community leaders.
- Global supports K-12 education and recreation programs, community organizations, and public safety programs in Albany.
- Global donates home heating oil to help families in need.
- Local giving includes:
 - Albany Police Athletic League
 - Albany Boys and Girls Club
 - Albany Department of Recreation
 - Capital District Black Chamber of Commerce
 - Christ Church of Albany
 - 4th Family STEM Through Sports Program
 - Giffen Elementary School
 - Lark Street Business Improvement District, (including Movies Under the Stars sponsorship)
 - Madison Avenue Fire Relief Fund
 - TruHeart Holiday Dinner
 - WAGE Center at the Albany Housing Authority

GLOBAL) ALBANY

June 13, 2018

Dear Neighbor,

Over the past few months, you may have heard a little about Global Partners. But, so far, you haven't heard directly *from* Global Partners. So we'd like to introduce ourselves and tell you a little about what we do.

Essentially, we're in the energy delivery business. Every day, people fill their tanks, heat their homes and operate their businesses with the products we deliver.

In 2007, we purchased our terminal near the Port of Albany from ExxonMobil. Since then, we've invested more than \$30 million upgrading the facility – making it safer, and more efficient.

We're one of about two dozen industries that operate near or at the port. The property we own has been a petroleum terminal for a century. Our goal is to operate it in a safe, environmentally sound manner while delivering the energy that people rely on.

Later this year, we plan to propose some changes at the terminal – based in part on what we've heard from you and your neighbors. Our proposal will call for reducing the amount of crude oil at the Global terminal. And there will be no heaters for that crude oil.

As we propose these changes, we'll stay in touch. Meanwhile, if you have questions, please let us know at albanyinfo@globalp.com

Thanks,

Chuck Furman Terminal Manager



GLOBAL AT A GLANCE

- Global began more than 75 years ago delivering home heating oil with a single truck. We made a simple promise to all our customers: Reliability. No matter the weather or the circumstances, they could count on us to deliver the fuel they needed and to keep our word.
- We're a third-generation, family-run company.
- We employ 30 people at our Albany terminal, and approximately 250 people in the greater Albany region.
- We're one of the largest wholesalers of Mobil gasoline in the region.
- Every day, around 700,000 people fill their tanks with gasoline we deliver.
- Our mission is to be the safest and most reliable provider of the energy people use to heat their homes, take their kids to school or operate their businesses.

For more information, visit globalalbany.com

Global Albany 50 Church Street / Albany, NY 12202 / globalalbany.com



Figure 1B. Letter Distribution Map

The direct mail with Notice of the Open House and Fact Sheet went out to 2,724 total addresses, including:

- 2,686 residential addresses including multi-family housing units, apartments, and houses in the vicinity of the terminal (see map 1B, letter distribution map).
- 38 from the Stakeholders List that are geographically outside of the letter distribution map area.
- Global will continue to add to the Stakeholder List and send all direct mail to this list moving forward.

Appendix C Open House Invitation/Fact Sheet, Flyer, and Public Stakeholder List

See following pages.

OPEN HOUSE INVITATION/FACT SHEET



Dear Neighbor,

Global Partners is moving ahead with the process of renewing our air permit for our Albany Terminal, As part of the permit renewal modification, we are proposing some changes in the way the terminal is operated.

These changes have been influenced by what we have heard from the community previously. They include a proposed decrease of more than 75% in the amount of crude oil allowed to be shipped through the terminal. The proposed changes are summarized in this brochure.

Global Partners

Open House

A permit renewal modification will be submitted to the New York State Department of Environmental Conservation (NYSDEC) in March, However, the public process with opportunities for further input begins now.

We are hosting an Open House on February 25 so you can learn more, ask questions, and share your views. We hope to see you there.



PLEASE JOIN US

WHEN Tuesday, February 25 6:00pm – 8:00pm

Senior Vice President of Terminal Operations

What changes are being proposed?

Global's Albany Terminal operates under a Title V air permit from the New York State Department of Environmental Conservation. In March, Global plans to submit a permit renewal modification to the NYSDEC. It will include some voluntary changes that have been influenced by previous community input.

Key changes include:

· Decreasing the allowable amount of crude oil to

be shipped through the terminal by over 75%. · Adding flexibility to respond to changes in the

 Installing enhanced controls to more effectively treat emissions from our loading operations.

- Expanding the types of biofuels handled at the terminal to help meet New York's renewable energy requirements and greenhouse gas reduction initiatives. Installing natural-gas fired boilers needed to
- receive, store, and ship certain biofuels. No other products will be heated.
- market and improve service to our customers.

About the Albany Terminal

- Global Albany is a hub for the safe delivery, storage, and distribution of energy products. The terminal helps fuel homes, vehicles, and the local economy.
- The terminal handles a variety of products, including gasoline, diesel fuel, home heating oil, kerosene, and renewable fuels such as ethanol and bio-based diesel.
- Global purchased the Albany Terminal from ExxonMobil in 2007. Since then, we've invested more than \$30 million in upgrades.

Since 2013 the Albany Terminal has undergone more than 400 inspections by state and federal agencies with no major findings.

As a third-generation, family-run company, Global Partners is committed to working safely and reliably with communities and regulators everywhere we do business.

WHERE Ezra Prentice Homes Community Room 625 South Pearl Street Albany, NY 12202



FOR MORE Please visit INFORMATION globalalbany.com

OR CONTACT OUR Mark Bobb-Semple COMMUNITY Community Liaison OUTREACH OFFICE mark.bobb-semple@globalp.co (518) 775-7093

GLOBAL) ALBANY

You are invited to an open house.

PLEASE JOIN US

WHAT An Open House on the

Albany Terminal Air Permit WHEN

Tuesday, February 25 6:00pm – 8:00pm

WHERE

Ezra Prentice Homes Community Room 625 South Pearl Street Albany, NY 12202



COME TO THE OPEN HOUSE TO LEARN MORE

Global Partners is moving ahead with the process of renewing our air permit for our Albany Terminal. As part of this effort, we are proposing some changes to the terminal that respond to previous community input.

 FOR MORE
 CONTACT OUR COMMUNITY OUTREACH OFFICE

 INFORMATION
 Mark Bobb-Semple | Community Liaison | mark.bobb-semple@globalp.com | (518) 775-7093

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GLOBAL) ALBANY

Open house on the Albany Terminal air permit

What changes are being proposed?

Global's Albany Terminal operates under a Title V air permit from the New York State Department of Environmental Conservation (NYSDEC). In March, Global plans to submit a permit renewal modification to the NYSDEC. It will include some voluntary changes that have been influenced by previous community input.



Key changes include:

- Decreasing the allowable amount of crude oil to be shipped through the terminal by over 75%.
- Installing enhanced controls to more effectively treat emissions from our loading operations.
- Expanding the types of biofuels handled at the terminal to help meet New York's renewable energy requirements and greenhouse gas reduction initiatives.
- Installing natural gas-fired boilers needed to receive, store, and ship certain biofuels. No other products will be heated.
- Adding flexibility to respond to changes in the market and improve service to our customers.

We are hosting an open house on February 25 so you can learn more, ask questions, and share your views. We hope to see you there.
20-Mar-20										
Category	First Name	Last Name	Title	Business	Address1	Address2	City	State	Zip	Email
Civic+Envir+Business leaders	Dominick	Calsolaro					Albany	NY		
			Director of	Boys and Girls Club of			Albany	NY		
Civic+Envir+Business leaders	Tim	Doherty	Operations	the Capital Area	21 Delaware Ave		Albuny		12210	
Ciudad England Duraing and Landaur	A11	C		C	222.0		Albany	NY	42202	
CIVIC+ENVIF+BUSINESS leaders	Alice	Green	Executive Director	Center for Law & Justice	161 Washington				12202	
Civic+Envir+Business leaders	Scott C.	Jarzombek	Executive Director	Albany Public Library	Ave		Albany	NY	12210	
				Capital City Rescue			A11			
Civic+Envir+Business leaders	Perry	Jones	Executive Director	Mission	259 S. Pearl Street		Albany	NY	12202	
				Albany Housing	200 South Pearl		Albany	NY		
Civic+Envir+Business leaders	Steve	Longo	Executive Director	Authority	Street		,		12202	
	Kavin	Mitchell	Provident	Just Be Ready, Street						
CIVIC+EIIVII+Busiliess leaders	Kevili	witten	President	South End						
				Neighborhood						
Civic+Envir+Business leaders	Joanne	Morton	President	Association						
				Police Athletic League	844 Madison		Albany	NY		
Civic+Envir+Business leaders	Sergeant (Ret.) Leonard	Ricchiuti			Avenue		,		12208	
Civic+Envir+Business leaders	Gregory	Sorrentino	President/CEO	Services	314 South Manning		Albany	NY	12208	
Civic+Envir+Business leaders	Executive Director	Somentino	Tresident/CEO	Avillage	3 Lincoln Square		Albany	NY	12200	
				Salvation Army of	20 Courth Formu Ct		Alb.e.e	NIV/		
Civic+Envir+Business leaders				Albany New York	20 South Ferry St.		Albany	NY	12202	
			Albany County							
Gov't	Craig	Apple	Sheriff Chief City Auditor	eu 11 11	16 Eagle Street		Albany	NY	12207	
Govt	Dorcey	Applyrs	Regional Permit	City Hall	24 Edgle Street		Albany	INY	12207	
			Administrator,		1130 North		Schenect			
Gov't	Nancy	Baker	Region 4	NYSDEC	Westcott Rd		ady	NY	12306	
					625 Broadway				12233-	
Gov't	Tom	Berkman	General Counsel	NYSDEC	025 bioadway		Albany	NY	0001	
Gov't	Senator Neil	Breslin		Capitol Building	172 State Street	Room 430C	Albany	NY	12247	
Gov't	Corev	Filis	President	Albany Common Council	24 Fagle Street	Room 202	Albany	NY	12207	
Govi	Assembly Member	LIIIS	Fresident	council	24 Lagie Street	100111 202			12207	
Gov't	Patricia	Fahy			198 State Street	LOB 452	Albany	NY	12248	
				Albany County						
Gov't	Samuel	Fein		Legislature, District 6	5 Elm Street		Albany	NY	12202	
C - t	C	e da da da l		Albany Common	18 Sparkill Ave		Albany	NY	42200	fan de siele en sie Ones sil en se
Govt	Sonia	Frederick	Regional Disector	Council, ward 1	1120 North		Cabaaaat		12209	Trederick.sonia@gmail.com
Gov't	Keith	Goertz	Regional Director, Region 4	NYSDEC	Westcott Rd		adv	NY	12306	
Gov't	Jordan	Gougler		NYSDEC Office of Envir	625 Broadway, 14th	Floor	Albany	NY	12233	
		Ŭ	City of Albany Fire		26 Broad Street					
Gov't	Joseph	Gregory	Chief		20 BI Gau Stillet		Albany	NY	12202	
			City of Albany		165 Henry Johnson					
Govit	Eric	Hawkins	Police Chief	Dest of Alberty	BIVD		Albany	NY	12210	
Govi	Richard	непагіск	CEO	Albany Common	100 50000		Albany	INY	12202	
Gov't	Derek	Johnson		Council, Ward 2	69 Trinity Place	Apt. 209	Albany	NY	12202	
				Albany County						
Gov't	Andrew	Joyce	Chairman	Legislature	112 State Street	Room 710	Albany	NY	12207	
			President Pro	Albany Common	80 Van Rensselaer		Albany	NY		
Gov't	Kelly	Kimbrough	Tempore	Council, Ward 4	Blvd		-		12204	
Gov't	Dan	McCov	Albany County Executive		112 State Street	Room 1200	Albany	NY	12207	
South .	Accombly Mombor John	McDonald	Executive		198 State Street	108 417	Albany	NIV	12240	
Govi	Assembly Wember John	NICDONAIU		Albany County		LUB417	Albally	INT	12240	
Gov't	Carolyn	McLaughlin		Legislature, District 1	112 State Street	Room 710	Albany	NY	12207	cmclaughlin2017@gmail.com
	- ,		Director, Office of						,	in the second second
			Environmental		625 Broadway				12233-	
Gov't	Rosa	Mendez	Justice	NYSDEC			Albany	NY	0001	
Coult	Coordina	Dana	Director of	Albany County	112 Charles Charles	Decem 1200	Albert		10007	
	George	renn	operations		TTT STALE STLEET	KUUM 1200	Albany	INY	1220/	
Gov't	Basil	Seggos	Commissioner	NYSDEC	625 Broadway		Albany	NY	0001	
Gov't	Kathy M.	Sheehan	Mayor of Albany	İ	24 Eagle Street	Room 102	Albany	NY	12207	
			Commission	Albany Port District	106 Smith Blvd					
Gov't	Georgette	Steffens	Chairperson	Abarry Fore District	100 511111 8140		Albany	NY	12202	
Gov't	Congressman Paul	Tonko			19 Dove Street	Ste 302	Albany	NY	12210	
Coult	Clingh ath C	M/h al are	Commissioner	Albany County	175 Crean Chreat		Alban	NIX	12202	
	Orville	Ahrahams		Department of ficarti	175 Green Street		Albally	INT	12202	
Individual	Mary	Alsten		İ			Albany	NY		1
Individual	Lawrence	Clark					Albany	NY		
Individual	Susan	Dubois					Albany	NY		
Individual	Portia	Gaddy					Albany	NY		
Individual	Tarea	Giles					Albart	NIV		
Individual	Demetrius	Martine ⁷					Albany	NY		
Individual	Judith	Mazza	1	1	1		Albany	NY		1
Individual	Tammy	Miller					Albany	NY		
Individual	Kevin	Mitchell					Albany	NY		
Individual	Michael	Saccoman								
Individual	Kevin	Thompson					Alb	A IV		
mulviuuai	мртн	TUCKER	1				Albany	ΝÝ		1

PUBLIC STAKEHOLDER LIST

Individual	James	Tucker					Albany	NY		
Individual	Colleen	Williams					Albany	NY		
Individual	Stephen	Winters					Albany	NY		
Neighbor Groups				Ezra Prentice Homes Tenants Association						
Neighbor Groups				Residents of Steamboat Square						
Neighbor Groups				Residents of the Mount Hope neighborhood and the South End						
Neighbor Groups				South End Neighborhood Association						
Schools + Religious Orgs	Jasmine	Brown	Principal	Giffen Memorial Elementary School	274 S. Pearl Street		Albany	NY	12202	
Schools + Religious Orgs	Marc	Johnson	Pastor	St. John's Church of God in Christ	74 4 th Ave.		Albany	NY	12202	
Schools + Religious Orgs				Mount Calvary Baptist Church	58 Alexander Street		Albany	NY	12202	
Schools + Religious Orgs				The Parish of St. John the Evangelist and St Joseph	53 Herrick St	R	Renssalae r	NY	12144	
Schools + Religious Orgs	Amanda	Boyd		Giffen Memorial Elementary School	274 S. Pearl Street		Albany	NY	12202	

Albany Terminal Public Participation Plan June 1, 2020

Appendix D Virtual Engagement Plan

See following pages.

Global Albany Outreach Proposal to the NYDEC Virtual Engagement Plan

Global hosted an open house on February 25 on its proposed Title V permit modification application for the Albany Terminal and was scheduled to host a public meeting in March after the application was submitted. The purpose of the public meeting is to allow Global's neighbors the opportunity to learn about the proposed changes and ask questions. Due to COVID-19, that meeting cannot happen in person, as initially imagined.

Here are our recommendations on proceeding with outreach to fulfill the intent of the public meeting, and provide the community different ways to learn about the permit and engage with Global.

Global is looking to use a blend of technologies and create a variety of access points so that it is easy for neighbors to participate. We seek to educate and engage the community.

- Make a video that clearly explains the permit and Global's operations in Albany. The video would include sections on these topics:
 - About Global
 - Terminal operations
 - Community outreach
 - Permit: what changes are being proposed?
 - What is biodiesel?
 - Flexibility and throughput caps
 - Permitting process, what to expect, what's next
- Publish the video through the GlobalAlbany.com website, other websites like the Albany Housing Authority, and via email to the stakeholder list. Global's community liaison would also follow up with certain stakeholders to ensure they have received the information.
- Send a direct mail to neighbors and stakeholders (using the existing mailing list). The mailing would inform and invite neighbors to join the virtual public meetings and view the video and other information online. It would also include a postage pre-paid response card soliciting questions from community members. The neighbors and stakeholders that receive the postcard would thus be able to quickly write down a question, and mail their postcard back to Global at no cost. The mailing would include this information:
 - A summary of the application;
 - Directions on how to obtain the application materials on the publicly available website;

- The time and date of a video- or teleconference-meeting, and directions for accessing it;
- A contact list of telephone numbers and e-mail addresses;
- Instructions on how impacted residents can submit questions or comments via email, writing or telephone, and the deadline for submitting questions via those alternative methods.
- The community could also submit questions through the website.
- The virtual meeting information would also be available online through the GlobalAlbany.com website, through other websites like the Albany Housing Authority and via email to the stakeholder list. If feasible under COVID-19 restrictions, we will also post information at these locations. The community could also submit questions through the website.
- Host two virtual public meetings that are accessible by phone and video. Global contemplates hosting two meetings, one in the evening and one midday. The meetings would follow this format:
 - Screening of the video to explain the permit and Global's operations.
 - Additional remarks by subject matter experts at Global and possible community leaders.
 - Q&A section
 - Global would read questions from the submitted postcards and online questions.
 - Global would open the meeting to additional questions.
 - Global's prime objective is to listen to the community at these virtual meetings. When possible, Global will respond to questions.
 - Discussion of status of review process and steps going forward.
- Videos of the meetings would be saved online.
- Pertinent questions and comments will be saved in a separate document that is easily searchable online and will be provided to the NYDEC. All comments received via postcard, email or at the meetings will be documented.
- <u>*Technology:*</u> Global will need to research the best platform to host the virtual public meetings, balancing access and security. For example, attendees that wish to ask a question "live" during the virtual public meetings may need to RSVP in advance to allow Global to keep the meeting secure. However, Global will look for ways to make the video feed live and public during the virtual meeting for all observers.

Suggested Timeline (given in number of weeks per phase, start date will be adjusted accordingly)

3 Weeks

- Finalize virtual outreach with NYDEC
- Global produces video and outreach materials

1-2 Week

- Mail post cards*
- Publish video online
- Outreach to stakeholders

1 Week

- Host two virtual meetings

1 Week

- Publish virtual meetings and Q&A to website

*Three-weeks notice is written into our PPP, please note the NYDEC is requiring 15-days per the below criteria.

Criteria from NYDEC

- 1. **Applicants** and **DEC staff** must immediately cancel all public meetings and information sessions.
- 2. As part of any public participation plans, **applicants** must host one video or teleconference call in place of cancelled public meetings and information sessions.
- 3. **Applicants** must create a dedicated publicly accessible website to publish all application and related documents.
- 4. **Applicants** must mail informational flyers to impacted residents 1) with a summary of the application, 2) directions on how to obtain the application materials on the publicly available website, 3) the time and date of a video- or teleconference-meeting (that would take place in place of a public meeting), and 4) a contact list of telephone numbers and e-mail addresses. Applicants must provide explicit directions on signing onto the tele- or video conference. The informational flyer should also include instructions on how impacted residents can submit questions or comments via email, writing or telephone, and the deadline for submitting questions via those alternative methods.
- 5. The video- or teleconference should occur not less than fifteen days from the postmark date of the informational mailing.
- 6. Public participation plans must allow for impacted residents to submit comments or questions by telephone or email to the **applicant** for a period of 15 days from the date of the video or teleconference. The minimum public comment period shall be 35 days from the date of the post mark date of the informational flyer.
- 7. **Applicants** must provide to the DEC staff written comments, if any, and a summary of public comments received."

Project Emission Potential

Total Project Emission Potential

		ACT	UALS		BASELINE	PROJECTED	PROJECT		OP PEP (gollong)
EMISSION SOURCE	2015	2016	2017	2018	EMISSIONS*	EMISSIONS	POTENTIAL		OK FEF (galions)
Marine Loading of Blendstock Gasoline (See Pg 2, Calc A)	**	**	**	**	**	3.17	3.17	380,000,000	
Marine Loading of Gasoline / Ethanol / Distillate*** (See Pg 2, Calc B)	2.221	5.251	3.617	0.748	3.74	3.08	NA	369,000,000	1 028 200 000
Truck Loading of Conventional Gasoline / Ethanol / Distillate*** (See Pg 2, Calc C)	0.708	0.799	1.057	1.022	0.75	7.34	6.58	879,300,000	1,928,300,000
Rail Loading of Conventional Gasoline / Ethanol / Distillate*** (See Pg 2, Calc D)	2.604	2.815	2.883	3.127	2.71	2.50	NA	300,000,000	
Marine Loading of Crude Oil (See Pg 2, Calc E)	7.258	1.457	0.076	0.000	4.36	3.76	NA	450,000,000	450,000,000
28 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.989	0.53	0.43	NA	****	
29 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.988	0.53	0.43	NA	****	
30 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.988	0.53	0.43	NA	****	****
64 (Distillate)*** (See Note 6)	0.218	0.218	0.431	0.621	0.22	0.43	0.21	****	
33 (Distillate)*** (See Note 6)	0.065	0.528	0.695	0.988	0.30	0.43	0.13	****	
Boiler Emissions (See Note 7)	**	**	**	**	**	1.23	1.23	-	-
Additional Fugitive Emissions Associated with Boilers	**	**	**	**	**	0.84	0.84	-	-
31 (Gas / Ethanol / Crude)	3.960	3.195	2.776	2.764	3.58	5.73	2.15	273,731,737	
32 (Gas / Ethanol / Crude)	4.520	3.195	2.776	2.764	3.86	5.73	1.87	273,731,737	
39 (Gas / Ethanol / Crude)	3.036	2.545	2.208	4.496	2.79	4.33	1.54	221,283,128	
114 (Gas / Ethanol / Crude)	0.266	0.303	0.345	0.337	0.28	4.06	3.77	367,729,496	
115 (Gas / Ethanol / Crude)	0.369	0.413	0.472	0.462	0.39	5.77	5.38	501,262,444	2 885 540 000
117 (Gas / Ethanol / Crude)	3.051	3.050	3.065	3.045	3.05	2.88	NA	239,692,731	2,885,540,000
118 (Gas / Ethanol / Crude)	2.968	4.344	4.350	4.351	3.66	5.07	1.41	202,066,061	
119 (Gas / Ethanol / Crude)	3.109	3.306	3.317	3.302	3.21	3.66	0.45	145,439,719	
120 (Gas / Ethanol / Crude)	0.179	0.200	0.202	0.197	0.19	3.21	3.02	103,021,903	
121 (Gas / Ethanol / Crude)	7.215	7.674	7.694	7.666	7.44	9.51	2.06	557,581,044	
TOTAL	43.331	40.877	38.046	38.855	42.10	73.99	33.82		
		t Emission Potential		33.82					

All emissions in tons per year

Actuals do not include emissions from tank maintenance activities since no modifications to these activities are being requested.

*Baseline Emissions were calculated using 2015 & 2016.

**No past actual emissions from blendstock loading or the proposed boilers, as these activities are not currently permitted.

***Distillate storage emissions (projected and past actuals) are standing losses only.

****No distillate throughput was modeled through distillate tanks, as all of the 1.9283 billions gallons of throughput was modeled as gasoline through IFR Tanks. Distillate standing losses were included for all distillate tanks (See note 1).

Notes:

1. Tank Scenario: The 1.9283 billion gallons of refined product is distributed amongst all IFR tanks as Conventional Gasoline. Working losses from 380 million gallons of blendstock /component is distributed amongst the previously permitted blendstock IFR tanks and included in addition to the gasoline working losses. And working losses from 450 million gallons of crude oil is distributed amongst all IFR tanks and included in addition to the gasoline working losses. And working losses are all assumed to be gasoline and/or blendstock because it is more conservative to assume IFR tank standing losses are from gasoline and/or blendstock storage. All distillate tanks are shown with distillate standing losses. Working losses are not considered for distillate tanks because it is more conservative to assume the entire 1.9283 billion gallons of refined product is gasoline. Additional throughput is included for tank-to-tank transfers.

2. Loading Scenario: 1.9283 billion gallons total throughput, 380 million gallons Blendstock, 879.3 million gallons conventional gasoline or lower RVP product at Truck Loading w/ VAC and VRU @ 2 mg/L, 300 million gallons conventional gasoline or lower RVP product at Rail Loading w/ VAC and VCU @ 2 mg/L, remaining 369 million gallons conventional gasoline or lower RVP product at Marine Loading w/ VAC and VCU @ 2 mg/L. Up to the total 1.9283 billion gallons of refined product throughput may be loaded at the marine rack, however the PEP scenario used maximizes throughput at the truck rack first to minimize the baseline emissions and therefore maximize the PEP.

3. N/A - Projected Emissions are lower than the Baseline Emissions (PEP is negative) and therefore PEP was N/A

4. Global Plans to paint the distillate storage tanks white which will result in a decrease in distillate storage emissions provided in this table. Tank emissions were calculated using current paint color.

5. The projected throughput for the IFR tanks includes both 1.929 billion gallons of gasoline distributed amongst the tanks to give them an equal number of turnovers, and 450 million gallons of crude distributed amongst the tanks to give them an equal number of turnovers. IFR emissions do not include landing and cleaning emissions. Baseline emissions also exclude landing and cleaning emissions.

6. Baseline distillate tank emissions only include standing losses.

7. Boiler emissions calculated in PTE. Emissions included are for the new boilers.

8. Alternative loading scenarios are also proposed as part of the application, however the alternative operating scenarios are designed to limit emissions to less than the primary loading scenarios included in the PEP. Additional information regarding the Alternative Operating Scenarios can be found in the Modification Application and PTE.

Project Emission Potential

A. EMISSIONS FROM MARINE LOADING OF BLENDSTOCK

Throughput:	380	Mmgal]			
Control Device Emission Rate:	2	mg/L	equal to:	0.0167 lbs/1000 gallons		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)	
-	N/A	380	6,343	6,343	3.17	

B. EMISSIONS FROM MARINE LOADING OF CONVENTIONAL GAS

Throughput:	369	Mmgal			
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallons
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)
	N/A	369	6,159	6,159	3.08

C. EMISSIONS FROM TRUCK LOADING OF CONVENTIONAL GAS

Throughput:	879.3	Mmgal			
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallons
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VRU	Total Emissions (lbs)	Total Emissions (tons)
	N/A	879	14,676	14,676	7.34

D. EMISSIONS FROM RAIL LOADING OF CONVENTIONAL GAS

Throughput:	300	Mmgal]			
Control Device Emission Rate:	2	mg/L	equal to:	0.0167 lbs/1000 gallons		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)	
	N/A	300	5,007	5,007	2.50	

E. EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

Throughput:	450	Mmgal					
Control Device Emission Rate:	2	mg/L	equal to:	0.0167 lbs/1000 gallons			
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)		
	N/A	450	7,511	7,511	3.76		

GLOBAL COMPANIES

PRODUCT TERMINAL EMISSION REPORT SIC CODE 5171

Albany

Report Purpose 2020 PTE

Version Date 6/30/2020

Albany 2020 PTE _063020.xls6/30/2020



EMISSION SUMMARY

EMISSION UNIT OVERVIEW

	VOC				HAP		LARGEST SINGLE HAP; Hexane			
		Tank Landing			Tank Landing			Tank Landing		
Source Description	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Total Tank Emissions	
Course Becomption	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	
IFR Storage Tanks:							••			
Tank 117	2.884	2,179	5.063	0.230	0.173	0.403	0.114	0.086	0.200	
Tank 110	3 656	1 152	4 808	0.201	0.092	0.383	0.145	0.046	0.190	
	3.000	1.152	4.008	0.291	0.032	0.385	0.143	0.040	0.190	
	3.209	1.152	4.301	0.254	0.091	0.345	0.127	0.040	0.173	
Tank 121	9.506	4.051	13.557	0.757	0.322	1.079	0.376	0.160	0.537	
Lank 114	4.056	1.296	5.353	0.323	0.103	0.426	0.161	0.051	0.212	
Tank 115	5.771	4.051	9.822	0.459	0.323	0.782	0.229	0.160	0.389	
Tank 118	5.067	1.476	6.543	0.403	0.117	0.521	0.201	0.058	0.259	
Tank 39	4.335	4.220	8.554	0.343	0.333	0.676	0.172	0.167	0.339	
Tank 31	5.727	1.292	7.019	0.453	0.102	0.555	0.227	0.051	0.278	
Tank 32	5.727	1,292	7.019	0.453	0.102	0.555	0.227	0.051	0.278	
	Casalina / Eth		Capalina / Eth	Casalina / Eth		Capalina / Eth	Casalina / Eth		Capalina / Eth	
	Gasoline / Eth		Gasoline / Eth	Gasoline / Eth		Gasoline / Eth	Gasoline / Eth		Gasoline / Eth	
	Loading		Loading	Loading		Loading	Loading		Loading	
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions	
	tpy		tpy	tpy		tpy	tpy		tpy	
Gasoline / Ethanol Loading:										
Truck Loading Fugitive	0.000		0.000	0.000		0.000	0.000		0.000	
Truck Loading Stack	7 337		7 337	0.580		0.580	0 291		0 291	
Rail Loading Fugitive	0.000		0.000	0.000		0.000	0.000		0.000	
Rail Loading Stock	2,502		2,502	0.000		0.000	0.000		0.000	
Rail Loading Stack	2.503		2.503	0.196		0.190	0.099		0.099	
	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Emission	Tank Emissions	Emissions	Emission	
		tov		tov	tov	tov		thy	tov	
Distillate Stanson Tember	tpy	tþý	tpy	ιpy	tþý	ιpy	tþý	tpy	tþy	
Distillate Storage Tanks:	0.407	N10	0.407	0.040		0.040	0.000	N10	0.000	
lank 28	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0.000	
Tank 29	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0.000	
Tank 64	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0.000	
Tank 33	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	NA	
Tank 30	0.427	NA	0 427	0.043	NA	0.043	0.000	NA	0.000	
			0.121			0.010			0.000	
	Distillate		Distillate	Distillate		Distillate	Distillate		Distillate	
	Loading		Loading	Loading		Loading	Loading		Loading	
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions	
	LINISSIONS		LIIISSIOIIS	LIIISSIOIIS		LIIISSIOIIS	LINISSIONS		LIIISSIOIIS	
	tpy		tpy	tpy		tpy	tpy		tpy	
Distillate Loading:										
Truck Loading	0.000		0.000	0.000		0.000	0.000		0.000	
Rail Loading	0.000		0.000	0.000		0.000	0.000		0.000	
	Sauraa		Sauraa	Sauraa		Sauraa	Sauraa		Sauraa	
	Source		Source	Source		Source	Source		Source	
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions	
	tpy		tpy	tpy		tpy	tpy		tpy	
Product / Water Mixture Tank	0.000		0.000	0.000		0.000	0.000		0.000	
Equipment Fugitives	2.660		2.660	0.548	1	0.548	0.206		0.206	
VOCs from Combustion Sources	7 660		7 660	0.511		0.511	0.303		0 303	
VOCs from Engine Sources	0.029		0.029	0.002		0.002	0.001		0.001	
Marino Loading	6.835		6.835	0.002		0.002	0.001		0.001	
	0.855		0.855	0.490		0.490	0.271		0.271	
Additive Tank Emissions	0.072		0.072	0.072		0.072				
TOTAL OF SOURCES			101.33			8.34			4.03	
Total VOCs	101.33	tons/yr								
Total HAPs	8.34	tons/vr								
Total Largest Single HAD	3.01 / 02	tons/vr								
	4.05									
I otal GHG**	45,825.22	tons/yr								
Total PM***	3.63	tons/yr								
Total SOx**	41.38	tons/yr								
Total NOx**	9.99	tons/yr								
Total CO**	7.38	tons/yr								
Total CO2**	44 544 67	tons/vr								
Total TRS/H2S****	0.00	tons/vr								
	0.09	contor yr								

NOTE: BLG refers to a gasoline blending scenario. ** From Page 19 & 20 - Combustion and Page 21 - Generators *** From Page 19 & 20 - Combustion and Page 21 - Generators and Page 26 & 30 - Fugitive Dust **** From Page 22 - H2S Calculations

EMISSION SUMMARY

				10 (100) = 10				11 (70))		Total HAP	Total HAP from	
Source Description		Benzene	Ethylbenzene	Hexane	<u>HAP (lbs)</u> Isooctane	Toluene	Xylene (-m)	Naphthalene	Methanol*	this Page (lbs)	Landings (Next Page) (lbs)	Total HAP (lbs)
IFR Storage Tanks: Tank 117 Tank 119 Tank 120 Tank 121 Tank 115 Tank 115 Tank 118 Tank 39 Tank 31 Tank 32		27 34 26 87 37 53 47 35 46 46	8 10 9 26 11 16 14 12 16 16	228 290 254 753 321 457 401 343 454 454	36 46 40 119 51 73 64 54 72 72	50 64 56 165 70 100 88 75 100 100	39 49 43 128 55 78 68 58 77 77 77	3 4 3 10 4 6 5 4 6 6	68 86 76 224 96 136 120 102 135 135	459 582 507 1,513 646 919 807 685 905 905	347 183 182 645 206 645 235 667 204 204	806 766 690 2,157 852 1,564 1,042 1,352 1,109 1,109
Gasoline / Ethanol Loading: Truck Loading Fugitive Truck Loading Stack Rail Loading Fugitive Rail Loading Stack		0 60 0 20	0 20 0 7	0 581 0 198	0 92 0 31	0 127 0 43	0 99 0 34	0 8 0 3	0 173 0 59	0 1,160 0 396	0 0 0 0	0 1,160 0 396
Distillate Storage Tanks: Tank 28 Tank 29 Tank 64 Tank 33 Tank 30		2 2 2 2 2	3 3 3 3 3	0 0 0 0	0 0 0 0	20 20 20 20 20	49 49 49 49 49	0 0 0 0	10 10 10 10 10	85 85 85 85 85	0 0 0 0	85 85 85 85 85
Distillate Loading: Truck Loading Rail Loading		0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Product / Water Mixture Tank Equipment Fugitives VOCs from Combustion Sources VOCs from Engine Sources Marine Loading Additive Tank Emissions		59 62 0 59 0	61 21 0 19 38	412 607 2 541 0	127 96 0 86 0	219 133 1 119 0	218 103 0 92 106	1 0 0 3 0	0 0 0 73 0	0 1,096 1,022 4 991 144		0 1,096 1,022 4 991 144
Total Individual HAP (Ibs/yr)		903	378	8,052	1,337	1,997	1,870	68	1,534	13,165	3,519	16,684
Total Individual HAP (tpy)		0.45	0.19	4.03	0.67	1.00	0.93	0.03	0.77			
TOTAL HAPS (lbs/yr)	16,684									-		
TOTAL HAPS (tpv)	8.34											

EMISSION UNIT HAP SPECIATION (HAP Emissions (lbs) = Total VOC Emissions (lbs) * HAP Vapor Fraction (%))

* Biodiesel Only

EMISSION SUMMARY

	(HAP Emission	ns (lbs) = Total V0	DC Emission	s (lbs) * HAP Va	por Fraction (%))			
Source Description	Benzene	Ethylbenzene	Hexane	<u>HAP (lbs)</u> Isooctane	Toluene	Xylene (-m)	Naphthalene	Methanol*	Total HAP from Landings (lbs)
IFR Storage Tanks: Tank 117 Tank 119 Tank 120 Tank 114 Tank 115 Tank 118 Tank 39 Tank 31 Tank 32	20 11 9 37 12 37 14 34 10 10	6 3 3 11 4 12 4 4 4	173 91 91 321 103 321 117 334 102 102	27 15 15 51 16 51 19 53 16 16 16	38 20 20 70 23 70 26 73 22 22	29 16 16 55 17 55 20 57 17 17 17	2 1 1 4 2 4 1 1	51 27 27 96 31 96 35 100 30 30 30	(IDS) - 347 183 182 645 206 645 235 667 204 204 204
Total Individual HAP (lbs/yr)	195	61	1,755	278	385	298			3,519
Total Individual HAP (tpy)	0.10	0.03	0.88	0.14	0.19	0.15			1.76
(17)									

TANK LANDING HAP SPECIATION

* Biodiesel Only

2020 PTE



NOTE: All distilate loading was assumed to be loaded at the truck rack as emissions from both truck and rail processes are the same (same emission factor is used for both calculations).

IFR Tanks:

Tank Emissions calculated using AP-42.

											VOCs from Tanks (lb/yr)			
Tk. No.	Dia	Leg ht	no land	land avg days	Vol bbls	Volume gals	Turnovers	Thruputs	gal/day	Tk No	Standing	V	/orking*	Total
117	110	4	2	2.0	65,315	2,743,229	87.	4 239,692,731	656,692	117		5097	672	5,769
119	80	4	2	2.0	34,147	1,434,161	101.	4 145,439,719	398,465	119		6781	530	7,311
120	80	4	2	2.0	34,068	1,430,858	72.	103,021,903	282,252	120		5988	430	6,418
121	150	4	2	2.0	121,554	5,105,286	109.	2 557,581,044	1,527,619	121		17955	1057	19,012
114	120	4	1	2.0	90,188	3,787,905	97.	1 367,729,496	1,007,478	114		7205	908	8,113
115	150	4	2	2.0	134,346	5,642,527	88.	501,262,444	1,373,322	115		10517	1024	11,541
118	100	4	2	2.0	52,872	2,220,637	91.	202,066,061	553,606	118		9,521	613	10,135
39	125	4	3	2.0	73,176	3,073,373	72.	221,283,128	606,255	39		8,078	591	8,669
31	125	4	2	2.0	90,520	3,801,825	72.	273,731,737	749,950	31		10,658	795	11,453
32	125	4	2	2.0	90,520	3,801,825	72.	273,731,737	749,950	32		10,658	795	11,453
						33,041,626	-	2,885,540,000						99,874
	Average Turnove				Average Turnover	s 87.3								
					Total IFR Tank Throughput			t 2,885,540,000	* Working losses include working losses from gasoline. blendstock. ar				k, and crude	

* Working losses include working losses from gasoline, blendstock, and crude throughput. See following page for details.

Distillate Tanks: STANDING LOSSES ONLY

Tank Emissions calculated using AP-42.

		0								
					Actual		Calculated			
Tk. No.	Dia		vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	_	Tk No
28	125		91,170	3,829,140		0.0	C) C	ļ	28
29	125		91,170	3,829,140		0.0	C) C	,	29
64	125		87,870	3,690,540		0.0	C) C	,	64
33	125		91,170	3,829,140		0.0	C) C	,	33
30	125		91,170	3,829,140		0.0	C) C	,	30
			•	19,007,100	-		-			L
					Avera	ge Turnovers	-	1		

Additive Tanks

Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.

				Actual		Calculated			VOCs from Tanks (lb/yr)		
Tk. No.	Dia	vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	Tk No	Standing V	Vorking	Total
A-1		257	10,800		13.3	143,396.60	393	A-1	16	23	39
A-4		172	7,221		13.3	95,876.56	263	A-4	11	15	26
A-5		21	900		13.3	11,949.72	33	A-5	1	2	3
A-6		11	450		13.3	5,974.86	16	A-6	1	1	2
A-Generic		172	7,221		13.3	95,876.56	263	A-Generic	11	15	26
A-Exxon		85	3,554		13.3	47,188.10	129	A-Exxon	6	8	13
SA		175	7,366		13.3	97,801.79	268	SA	11	14	25
A-Red Dye		6	248		13.3	3,292.81	9	A-Red Dye	1	1	1
A-Red Dye 2		11	450		13.3	5,974.86	16	A-Red Dye 2	1	1	2
WHFO		6	250		13.3	3,319.37	9	WHFO	1	1	1
D-Fire Pump		6	250		13.3	3,319.37	9	D-Fire Pump	1	1	1
R-Fire Pump		3	125		13.3	1,659.68	5	R-Fire Pump	0	0	1
GAFO		21	900		13.3	11,949.72	33	GAFO	1	2	3
			39,735	0	Total Additive	527,580					144

Product Water/Mixture tanks

Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.

		5	,											
					Actual		Calculated				VOCs from Tanks (lb/	yr)		
Tk. No.	Dia		vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	_	Tk No	Standing	Working	Total	
65	92		39,072	1,641,015		-				65				-
130	75		33,854	1,421,868		-				130				-
			1											

	VOCs from Tanks (lb/yr)	
Standing	Working	Total
	854	854
	854	854
	854	854
	854	854
	854	854

4,270.6

IFR Tank No.	Tanks Volume (gal)	Throughput (gal/yr)	Turnovers
117	2,743,229	160,152,189	58.38
118	2,220,637	129,642,796	58.38
119	1,434,161	83,727,616	58.38
120	1,430,858	83,534,784	58.38
121	5,105,286	298,051,213	58.38
114	3,787,905	221,141,319	58.38
115	5,642,527	329,415,828	58.38
31	3,801,825	221,953,981	58.38
32	3,801,825	221,953,981	58.38
39	3,073,373	179,426,294	58.38
Total:	33,041,626	1,929,000,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
2.25	0.14	4501	275	2.39	4776
4.20	0.12	8408	245	4.33	8652
2.99	0.10	5988	197	3.09	6185
2.99	0.10	5988	197	3.09	6185
7.47	0.19	14938	375	7.66	15313
3.00	0.17	5994	348	3.17	6342
4.38	0.21	8750	414	4.58	9164
5.33	0.18	10658	364	5.51	11022
5.33	0.18	10658	364	5.51	11022
4.04	0.14	8078	271	4.17	8349

Total Permitted Distillate Storage:	1,929,000,000	gallons/yr	
	Tanks		
VFR	Volume	Throughput (gal/yr)	Turnovers
Tank No.	(gal)		
28	3,829,140	389,172,536	101.63
29	3,829,140	389,172,536	101.63
64	3,690,540	375,086,001	101.63
33	3,801,825	386,396,391	101.63
30	3,829,140	389,172,536	101.63
Total:	18,979,785	1,929,000,000	

	Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
ſ	0.43	0.40	854	797	0.83	1651
	0.43	0.40	854	797	0.83	1651
	0.43	0.38	854	768	0.81	1622
ſ	0.43	0.40	854	797	0.83	1651
ſ	0.43	0.40	854	797	0.83	1651

Total Permitted Crude Storage:	450,000,000	gallons/yr	
	Tanks		
IFR	Volume	Throughput (gal/yr)	Turnovers
Tank No.	(gal)		
117	2,743,229	37,360,542	13.62
118	2,220,637	30,243,265	13.62
119	1,434,161	19,532,103	13.62
120	1,430,858	19,487,119	13.62
121	5,105,286	69,529,832	13.62
114	3,787,905	51,588,177	13.62
115	5,642,527	76,846,616	13.62
31	3,801,825	51,777,756	13.62
32	3,801,825	51,777,756	13.62
39	3,073,373	41,856,834	13.62
Total:	33,041,626	450,000,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
1.29	0.16	2576	325	1.45	2901
2.41	0.14	4811	289	2.55	5101
1.71	0.12	3427	234	1.83	3660
1.71	0.12	3427	233	1.83	3660
4.27	0.22	8548	443	4.50	8992
1.72	0.21	3430	411	1.92	3841
2.50	0.25	5007	490	2.75	5497
3.05	0.22	6099	431	3.26	6530
3.05	0.22	6099	431	3.26	6530
2.31	0.16	4623	320	2.47	4943

otal.	33,041,020	

Total Permitted Blendstock Storage*: 506,540,000 gallons/yr *Includes permitted blendstock throughput of 380,000,000 gallons and tank-to-tank transfers. These throughputs were permitted as part of the 2011 Blending Project.

IFR Tank No.	Tanks Volume (gal)	Throughput (gal/yr)	Turnovers
117	2,743,229	42,180,000	15.38
118	2,220,637	42,180,000	18.99
119	1,434,161	42,180,000	29.41
120	1,430,858	0	0.00
121	5,105,286	190,000,000	37.22
114	3,787,905	95,000,000	25.08
115	5,642,527	95,000,000	16.84
31	3,801,825	0	0.00
32	3,801,825	0	0.00
39	3,073,373	0	0.00
Tota	al: 33,041,626	506,540,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
2.55	0.04	5097	72	2.58	5169
4.76	0.04	9521	80	4.80	9601
3.39	0.05	6781	99	3.44	6880
0.00	0.00	0	0	0.00	0
8.98	0.12	17955	239	9.10	18194
3.60	0.07	7205	149	3.68	7354
5.26	0.06	10517	119	5.32	10637
0.00	0.00	0	0	0.00	0
0.00	0.00	0	0	0.00	0
0.00	0.00	0	0	0.00	0

Total PTE Emissions:

	Total Standing*	Total Working**
117	2.55	0.34
118	4.76	0.31
119	3.39	0.27
120	2.99	0.21
121	8.98	0.53
114	3.60	0.45
115	5.26	0.51

31	5.33	0.40
32	5.33	0.40
39	4.04	0.30
28	0.43	**
29	0.43	**
64	0.43	**
33	0.43	**
30	0.43	**

* Max standing loss scenario when looking at gasoline, crude, and blendstock storage for IFR storage tanks. Distillate standing losses for VFR storage tanks.

** Sum of working losses from storage of gasoline, crude, and blendstock storage for IFR storage tanks. Zero working losses are assumed for VFR storage tanks, as total refined product throughput was conservatively assumed to be gasoline.

	117	119	120	121	114	115	118	39	31	32	-	Total Thruput	_	
Thruput	-	-	-	-	-	-	-	-	-	-	-	_	gal/yr	
Thruput	239,692,731	145,439,719	103,021,903	557,581,044	367,729,496	501,262,444	202,066,061	221,283,128	273,731,737	273,731,737	-	2,885,540,000	gal/yr	
Throughput (Bbl / Yr):	5,706,970	3,462,850	2,452,902	13,275,739	8,755,464	11,934,820	4,811,097	5,268,646	6,517,422	6,517,422	-	68,703,333	bbl/yr	
	Lb / Year	Lb / Year	Tons /Year											
Total VOC***	5,769	7,311	6,418	19,012	8,113	11,541	10,135	8,669	11,453	11,453	-		99,874	49.94
Benzene	27	34	26	87	37	53	47	35	46	46	-		439	0.22
Ethylbenzene	8	10	9	26	11	16	14	12	16	16	-		137	0.07
Hexane	228	290	254	753	321	457	401	343	454	454	-		3,955	1.98
Isooctane	36	46	40	120	51	73	64	54	72	72	-		628	0.31
Toluene	50	64	56	165	70	100	88	75	100	100	-		868	0.43
Xylene (-m)	39	49	43	128	55	78	68	58	77	77	-		672	0.34
Naphthalene	3	4	3	10	4	6	5	4	6	6	-		52	0.03
Methanol	68	86	76	224	96	136	120	102	135	135	-		1,179	0.59
Total HAP Species	459	582	507	1,514	646	919	807	685	905	905	-		7,929	3.96
Non Hap VOC	5,309	6,729	5,911	17,498	7,467	10,622	9,328	7,984	10,548	10,548	-		91,945	45.97
Total VOC:	5,769	7,311	6,418	19,012	8,113	11,541	10,135	8,669	11,453	11,453	-		99,874	49.94
Total HAP	459	582	507	1,514	646	919	807	685	905	905	-		7,929	3.96
LARGEST SINGLE HAP: Hexane	228	290	254	753	321	457	401	343	454	454	-			

NOTE: Total working losses from tanks permited to store blendstock are conservatively speciated as if they are entirely blendstock, even though they contain working losses from gasoline, ethanol, and crude.

*** Tank Emissions calculated using AP-42.

	28	29	64	33	30						Total Thruput		
Thruput	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Thruput	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Throughput (Bbl / Yr):	-	-	-	-	-	-	-	_	-	-	-	bbl/yr	
	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year							Lb / Year	Tons /Year
Total VOC*	854	854	854	854	854	-	-	_	-	-		4,271	2.14
Benzene	1.8	1.8	1.8	1.8	1.8		-	_	_			9	0.00
Ethylbenzene	2.7	2.7	2.7	2.7	2.7		_	_	_			13	0.01
Hexane	0.4	0.4	0.4	0.4	0.4							2	0.00
Isooctane	-	-	-	-	-							-	_
Toluene	20.4	20.4	20.4	20.4	20.4		_	_	_			102	0.05
Xylene (-m)	49.3	49.3	49.3	49.3	49.3		_	_	_			247	0.12
Naphthalene	0.4	0.4	0.4	0.4	0.4	-	-	-	-	-		2	0.00
Methanol	10.1	10.1	10.1	10.1	10.1		_	_	_			50	0.03
Total HAP Species	85	85	85	85	85		_	_	_			426	0.21
Non Hap VOC	769	769	769	769	769	-	-	-	_	-		3,845	1.92
Total VOC:	854	854	854	854	854	-						4,271	2.14
Total HAP:	85	85	85	85	85		-	-	-	-		426	0.21
LARGEST SINGLE HAP: Xylene (-m)	49.33	49.33	49.33	49.33	49.33	-	-	-	-	-		247	0.12

* Tank Emissions calculated using AP-42.

Additive Tank Speciation

	A-1	A-4	A-5	A-6	A-Generic	A-Exxon	SA	A-Red Dye	A-Red Dye 2	WHFO	D-Fire Pump	R-Fire Pump	GAFO	Total	_	
Thruput	-	-	-	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Thruput	143,397	95,877	11,950	5,975	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	1,120,087	gal/yr	
Throughput (Bbl / Yr):	3,414	2,283	285	142	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	26,669	bbl/yr	
	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year		lb/year	tons/year
Total VOC*	39	26	3	2	26	13	25	1	2	1	1	1	3		144.16	0.07
Benzene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Ethylbenzene	10.4	6.9	0.9	0.4	6.9	3.6	6.5	0.3	0.4	0.4	0.3	0.2	0.9		38.16	0.02
Hexane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Isooctane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Toluene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Xylene (-m)	28.8	19.3	2.4	1.2	19.3	9.9	18.2	0.9	1.2	1.1	0.9	0.5	2.4		106.00	0.05
Naphthalene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A		-	-
Methanol	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Total HAP Species	39	26	3	2	26	13	25	1	2	1	1	1	3		144	0.07
Non Hap VOC	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-

* Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.

		Truck Loading	
	Gasoline	Distillate	Total
Total VOC lb/yr	14,674	0	14,674
Benzene	60	0	60
Ethylbenzene	20	0	20
Hexane (-n)	581	-	581
Iso-octane	92	-	92
Toluene	127	0	127
Xylene (-m)	99	0	99
Naphthalene	8	0	8
Methanol**	173	-	173
Total HAP Species	1,160	0	1,160
Non Hap VOC	13,515	0	13,515

	Rail Loading	
Gas / Eth	Distillate*	Total
5,007	0	5,007
20	0	20
7	0	7
198	-	198
31	-	31
43	0	43
34	0	34
3	0	3
59	0	59
396	0	396
4,611	0	4,611

Marine Loading									
Crude Oil	Gas / Eth	Total							
7,511	6,159	13,670							
30	28	59							
10	8	19							
297	244	541							
47	39	86							
65	54	119							
51	41	92							
-	3	3							
-	73	73							
501	490	991							
7,010	5,669	12,678							

* Distillate Rail Loading Emissions are captured in Distillate Truck Loading.

** Biodiesel Only

Total									
lb/yr	Tons/yr								
33,351	16.68								
139	0.07								
46	0.02								
1,321	0.66								
209	0.10								
290	0.14								
225	0.11								
13	0.01								
305	0.15								
2,547	1.27								
30,804	15.40								

TRUCK LOADING OF GASOLINE

				Loading Lo	sses 2mg/l	Tank-truck	loss 0 mg/l*	Tot	al
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	879.3	Total VOC	100.00%	14,674	7.337	-	-	14,674	7.337
		Benzene	0.41%	60	0.030	0	-	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	20	0.010	0	-	20	0.010
(VRU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	581	0.291	0	-	581	0.291
manufacturer of the VRU and verified with a Performance Stack Test every 5 years.)		Iso-octane	0.63%	92	0.046	0	-	92	0.046
		Toluene	0.87%	127	0.064	0	-	127	0.064
		Xylene (-m)	0.67%	99	0.049	0	-	99	0.049
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	8	0.004	0	-	8	0.004
		Methanol	1.18%	173	0.087	0	-	173	0.087
Controlled gasoline Loading Losses (lb/yr)	14,674	Total HAP Species*	7.90%	1,160	0.580	-	-	1,160	0.580
		Non Hap VOC	92.10%	13,515	6.757	-	-	13,515	6.757
		Total V	00	14,674	7.337	-	-	14,674	7.337
		Total HAP		1,160	0.580	-	-	1,160	0.580
		Largest Single HAP							
		Hexane (-n)		581	0.291	-	-	581	0.291

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

TRUCK LOADING OF	GASOLINE - ALTERNATIVE OPERATING SCENARIO
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				Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	То	tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	176.0	Total VOC	100.00%	2,937	1.469	11,749	5.874	14,686	7.343
		Benzene	0.41%	12	0.006	48	0.024	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	4	0.002	16	0.008	20	0.010
(VRU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	116	0.058	465	0.233	582	0.291
manufacturer of the VRU and verified with a Performance Stack Test every 5 years.)		lso-octane	0.63%	18	0.009	73	0.037	92	0.046
		Toluene	0.87%	26	0.013	102	0.051	128	0.064
		Xylene (-m)	0.67%	20	0.010	79	0.040	99	0.049
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	2	0.001	6	0.003	8	0.004
		Methanol	1.18%	35	0.017	139	0.069	173	0.087
Controlled gasoline Loading Losses (lb/yr)	2,937	Total HAP Species*	7.90%	232	0.116	928	0.464	1,161	0.580
		Non Hap VOC	92.10%	2,705	1.353	10,820	5.410	13,526	6.763
		Total VO	C	2,937	1.469	11,749	5.874	14,686	7.343
		Total HAI	C	232	0.116	928	0.464	1,161	0.580
		Largest Single HAP							
		Hexane (-n)		116	0.058	465	0.233	582	0.291

		Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	То	tal
	Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Total VOC	100.00%	2,937	1.469	11,749	5.874	14,686	7.343
Benzene	0.41%	12	0.006	48	0.024	60	0.030
Ethylbenzene	0.14%	4	0.002	16	0.008	20	0.010
Hexane (-n)	3.96%	116	0.058	465	0.233	582	0.291
lso-octane	0.63%	18	0.009	73	0.037	92	0.046
Toluene	0.87%	26	0.013	102	0.051	128	0.064
Xylene (-m)	0.67%	20	0.010	79	0.040	99	0.049
Naphthalene	0.05%	2	0.001	6	0.003	8	0.004
Methanol	1.18%	35	0.017	139	0.069	173	0.087
Total HAP Species*	7.90%	232	0.116	928	0.464	1,161	0.580
Non Hap VOC	92.10%	2,705	1.353	10,820	5.410	13,526	6.763
Total VOC		2,937	1.469	11,749	5.874	14,686	7.343
Total HAP		232	0.116	928	0.464	1,161	0.580
Largest Single HAP							
Hexane (-n)		116	0.058	465	0.233	582	0.291

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

				Loading	Losses	Fugitive Er	missions*
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Distillate Throughput at the Rack (MM gal)	-	Total VOC	100.00%	0.0	-	0.0	-
		Benzene	0.22%	0.0	-	0.0	-
		Ethylbenzene	0.31%	0.0	-	0.0	_
		Hexane (-n)	0.00%	0.0	-	0.0	-
Uncontrolled Loading Emission Factor (mg/l)	1.7	Iso-octane	0.00%	0.0	-	0.0	_
(AP-42, Compilation of Air Pollutant Emission Factors, Fifth		Toluene	2.39%	0.0	-	0.0	-
Edition, Volume I, Table 5.2-5.)		Xylene (-m)	5.78%	0.0	-	0.0	-
		Naphthalene	0.05%	0.0	-	0.0	-
Distillate Loading Rack Loss (Ib/year)	-	Methanol	1.18%	0.0	-	0.0	-
		Total HAP Species*	9.92%	0.0	-	0.0	-
		Non Hap VOC	90.08%	0.0	-	0.0	-
		Total V	C	0.0	0.0	0.0	0.0
		Total H	٩P	0.0	0.0	0.0	0.0
		Largest Single HAP					
		Xylene (-m)		_		_	_

* Fugitives are included in the Uncontrolled Loading Emission Factor and are calculated with the loading emissions.

Sample Calculations

Volume of distillate bottom loaded (gallons) * 3.785 litres/gallon * 1.7 mg/liter of distillate loaded * 2.2046 lbs/kg * 1 kg / 1,000,000 = Emissions (lbs) 229,300,000 gallons * 3.785 L/gal * 1.7 mg/L * 2.2046 * 1kg / 1,000,000 = Emissions (lbs) 3,253 lbs = Emissions (lbs)

RAIL LOADING OF GASOLINE

				Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	Tot	al
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	300.0	Total VOC	100.00%	5,007	2.503	-	-	5,007	2.503
		Benzene	0.41%	20	0.010	0	-	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	7	0.003	0	-	7	0.003
(VCU Emission Rating is guaranteed by the manufacturer of the VCU and verified with a Performance Stack Test every 5 years.)		Hexane (-n)	3.96%	198	0.099	0	-	198	0.099
		Iso-octane	0.63%	31	0.016	0	-	31	0.016
		Toluene	0.87%	43	0.022	0	-	43	0.022
		Xylene (-m)	0.67%	34	0.017	0	-	34	0.017
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	3	0.001	0	-	3	0.001
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	59	0.030	0	-	59	0.030
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	396	0.198	-	-	396	0.198
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	4,611	2.306	-	-	4,611	2.306
Table 5.2-5), multiplied by the leakage rate of 0.8%									
(AP-42, Compilation of Air Pollutant Emission		Total V	00	5,007	2.503	-	-	5,007	2.503
Factors, 5th Ed., Vol. I))		Total H	Total HAP		0.198	-	-	396	0.198
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	5,007	Hexane (-n)		198	0.099	-	_	198	0.099

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

				Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	To	tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	60.0	Total VOC	100.00%	1,001	0.501	4,005	2.003	5,007	2.503
		Benzene	0.41%	4	0.002	16	0.008	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	1	0.001	6	0.003	7	0.003
(VCU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	40	0.020	159	0.079	198	0.099
manufacturer of the VCU and verified with a		Iso-octane	0.63%	6	0.003	25	0.013	31	0.016
Performance Stack Test every 5 years.)		Toluene	0.87%	9	0.004	35	0.017	43	0.022
		Xylene (-m)	0.67%	7	0.003	27	0.013	34	0.017
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	1	0.000	35	0.017	35	0.018
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	12	0.006	27	0.013	39	0.019
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	79	0.040	329	0.164	408	0.204
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	922	0.461	3,676	1.838	4,599	2.299
Table 5.2-5), multiplied by the leakage rate of 0.8%									
(AP-42, Compilation of Air Pollutant Emission		Total VOC	;	1,001	0.501	4,005	2.003	5,007	2.503
Factors, 5th Ed., Vol. I))		Total HAP	Total HAP		0.040	329	0.164	408	0.204
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	1,001	Hexane (-n)		40	0.020	159	0.079	198	0.099

RAIL LOADING OF GASOLINE - ALTERNATIVE OPERATING SCENARIO

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

				Loading	Losses	Fugitive	Emissions
			Vapor	l bo/Voor	Topo/Vr	l bo/Voor	Topo/Vr
			Fraction	LDS/Teal	10115/11.	LDS/TEAL	10115/11.
Distillate Throughput at the Rail (MM gal)	-	Total VOC	100.00%	0.0	-	0.0	-
Distillate Rail Loading Emissions are included with the Distillate		Benzene	0.22%	0.0	-	0.0	-
Truck Loading emissions.		Ethylbenzene	0.31%	0.0	-	0.0	-
		Hexane (-n)	0.00%	0.0	-	0.0	-
Uncontrolled Bottom Loading Emission Factor (mg/l) (AP-42, Compilation of Air Pollutant Emission Factors, Fifth	1.70	Iso-octane	0.00%	0.0	-	0.0	-
		Toluene	2.39%	0.0	-	0.0	-
Edition, Volume I, Table 5.2-5.)		Xylene (-m)	5.78%	0.0	-	0.0	-
		Naphthalene	0.05%	0.0	-	0.0	-
Distillate Loading Rack Loss (lb/year)	-	Methanol	1.18%	0.0	-	0.0	-
		Total HAP Species*	9.92%	0.0	-	0.0	-
		Non Hap VOC	90.08%	0.0	-	0.0	-
		Total VOC		0.0	0.0	0.0	0.0
		Total HAP		0.0	0.0	0.0	0.0
		Largest Single HAP					
		NA		-		-	-

Sample Calculations

Volume of distillate bottom loaded (gallons) * 3.785 litres/gallon * 1.7 mg/liter of distillate loaded * 2.2046 lbs/kg * 1 kg / 1,000,000 = Emissions (lbs) 0 gallons * 3.785 L/gal * 1.7 mg/L * 2.2046 * 1kg / 1,000,000 = Emissions (lbs) 0 lbs = Emissions (lbs)

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

Throughput:

Control Device Emission Rate:

0.0167 lbs/1000 gallons 2 mg/L equal to: Loading Rack 0% Remaining Throughput after 100% Emission Factor* Emissions 2 mg goes to VCU 100% to VCU from V (lb/1000 gal) (lb/yr) (Mmgal) 3.9000 369 1,439,100 0 1,439,100 6,15

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

369 Mmgal

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

Emission Factor*	Throughput	Loading Rack Emissions (lb/br)	0% Remaining after 100%	100% to VCU	2 mg/L	Total Emissions (lbs/br)	Total Emissions
	(ivingal)		900010100				(10110/111)
3.9000	1.05	4095	0	4095	82	82	0.04

/L ′CU	Total Emissions (lbs)	Total Emissions (tons)
9	6,159	3.08

EMISSIONS FROM MARINE LOADING OF GAS/ETH: ALTERNATIVE OPERATING SCENARIO

299 Mmgal

Throughput:

Control Device Emission Rate:

0.0167 lbs/1000 gallons 2 mg/L equal to: 0.1% Fugitive Loading Rack Emission after Throughput 99.9% goes to Emission Factor* Emissions 99.9% to 2 mg/ (lb/yr) VCU VCU (lb/1000 gal) from V (Mmgal)

1,165,671

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

3.9000

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

			0.1% Fugitive				
		Loading Rack	Emission after			Total	
Emission Factor*	Throughput	Emissions	99.9% goes to	99.9% to	2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/hr)	VCU	VCU	from VCU	(lbs/hr)	(tons/hr)
3.9000	1.05	4095	4	4095	18	22	0.01

1,166

1,164,505

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

299

2 mg/L om VCU	Total Emissions (lbs)	Total Emissions (tons)
4,989	6,154	3.08

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

Throughput:

Control Device Emission Rate:

0.0835 lbs/1000 gallons 10 mg/L equal to: Loading Rack 0% Remaining Throughput after 100% Emission Factor* Emissions 2 mg/ goes to VCU 100% to VCU from V (lb/1000 gal) (lb/yr) (Mmgal) 6,15 3.9000 74 287,820 0 287,820

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

74 Mmgal

Max Emissions Per Hour:

4,000 barrels / hr 168,000 gal / hr

Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/hr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs/hr)	Total Emissions (tons/hr)
3.9000	0.17	655	0	655	14	14	0.01

/L ′CU	Total Emissions (lbs)	Total Emissions (tons)
9	6,159	3.08

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

Throughput:	450	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167 lbs/1000 gallons				
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	1.7996	450	809,804	0	809,804	7,511	7,511	3.76

* Emission Factor calculated below, per AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 5.2, Equation 2.

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

	Emission Factor (lb/1000 gal)	Throu (Mm	ghput igal)	Load Em (I	ing Rack issions b/hr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs/hr)	Total Emissions (tons/hr)
	1.7996	1.0	05		1890	0	1890	18	18	0.01
Emission Factor Calculation from AP-42:		CL 1.80	=	Ca 0.86	+	Cg 0.94	where:	CL = Total I Ca = Arriva	oading loss, l emission fa	b/1,000 gal of crude of crude of crude of crude of the second second second second second second second second s
Cg Formula Inputs: Va	Vapor Pressure12.5 (from EPA Tanks 4.09d)Molecular Weight50 (from EPA Tanks 4.09d)Vapor Growth Factor1.02 (from AP-42)Temperature *R507.37 (from EPA Tanks 4.09d)				contributed compartme oil loaded. Cg = Calcul contributed lb/1,000 ga	d by vapors i ent before lo ated emissio d by evapora al loaded.	n the empty tank ading, lb/1,000 gal of n factor (from Equatic tion during loading,			

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

oil loaded. -3), fcrude

on 3),

Facility Fugitives

Fugitive VOC Emissions

Ex	cisting Cour	nt*		Light	Heavy	Gas				
Light	Heavy	Gas		Factor (lbs/hr)	Factor (lbs/hr)	Factor (lbs/hr)	Lbs/Hr	Lbs/Year	lb/day	tpy
1,297	243	238	Valves	9.48E-05	9.48E-05	2.87E-05	0.15	1.3E+03	3.67	0.67
10	3	2	Pumps	1.19E-03	1.19E-03	1.43E-04	0.02	1.4E+02	0.38	0.07
123	28	58	Other	2.87E-04	2.87E-04	2.65E-04	0.06	5.1E+02	1.41	0.26
5,809	1,274	879	Flanges	1.76E-05	1.76E-05	9.26E-05	0.21	1.8E+03	4.95	0.90
*Includes	Gas Blendi	ing Project	, Butane Minor Mod, 20	012 Crude Project, and	Truck Rack Mind	or Mod	0.43	3797.49	10.40	1.90
Pr	oject Coun	t**		Light	Heavy	Gas				
Light	, Heavy	Gas		Factor (lbs/hr)	Factor (lbs/hr)	Factor (lbs/hr)	Lbs/Hr	Lbs/Year	lb/day	tpy
200	28	150	Valves	9.48E-05	9.48E-05	2.87E-05	0.03	2.3E+02	0.62	0.11
27	28	4	Pumps	1.19E-03	1.19E-03	1.43E-04	0.07	5.8E+02	1.59	0.29
10	28	58	Other	2.87E-04	2.87E-04	2.65E-04	0.03	2.3E+02	0.63	0.11
500	28	500	Flanges	1.76E-05	1.76E-05	9.26E-05	0.06	4.9E+02	1.33	0.24
**Includes	Current P	roject ONL	Y				0.17	1522.54	4.17	0.76
-	Total Coup	+		Light	Норм	Gas				
Light		Gas		Light Eactor (lbs/br)	Factor (lbs/br)	Gas Eactor (lbs/br)	l bc/Ur	l.bs/Voor	lb/day	tov
1 407	⊓eavy 271	GdS 200					LDS/FII		10/uay	ιμy 0.79
1,497	211	500	Dumps	9.40E-03	9.48E-03	2.07 E-03	0.10	7.2⊑±02	4.29	0.70
122	56	116	Othor	1.19E-03	2.875.04	2.655.04	0.08	7.20+02	2.04	0.30
6 300	1 302	1 370	Flanges	2.07E-04	2.87E-04	2.03E-04	0.08	7.4E±02	6.20	1 15
0,309	1,302	1,379	Flanges	1.70E-05	1.70E-05	9.202-03	0.20	2.3E+03 5320.04	14.58	2.66
			Light Liquid	Light Liquid	Heavy Liquid	Heavy Liquid	Gas	Gas	Total	Total
			Fraction	Lbs/Year	Fraction	Lbs/Year	Fraction	Lbs/Year	Lbs/Year	tpy
Total VOC)		100.00%	2937.65	100.00%	890.08	100.00%	1492.30	5320.04	2.66
Benze	ene		1.80%	52.88	0.001%	0.01	0.41%	6.05	58.94	0.03
Ethylb	enzene		2.00%	58.75	0.01%	0.12	0.14%	2.05	60.92	0.03
Hexan	ne		12.00%	352.52	N/A	N/A	3.96%	59.10	411.61	0.21
Isooct	ane		4.00%	117.51	N/A	N/A	0.63%	9.34	126.84	0.06
Toluer	Toluene 7.00%		205.64	0.03%	0.28	0.87%	12.97	218.89	0.11	
Xylene	Xylene (-m) 7.00%		205.64	0.29%	2.58	0.67%	10.05	218.26	0.11	
Naphthalene N/A		N/A	0.10%	0.89	N/A	N/A	0.89	0.00		
Methanol* N/A		N/A	0.00%	0.00	N/A	N/A	0.00	0.00		
Total HAP	PS		33.80%	992.93	0.44%	3.88	6.67%	99.55	1096.35	0.55
Non Hap	VOC		66.20%	1944.73	99.56%	886.21	93.33%	1392.75	4223.68	2.11

NOTE: Based on facility-specific equipment component counts. Emissions calculated per EPA guidance "Protocol for Equipment Leak Emission Estimates" (USEPA, November 1995).

HAP data

	Worst Case	VAPOR FRA	ACTION		Worst Case	LIQUID FRACT	LIQUID FRACTION (wt%)		
HAP	Refined Product	Blending	Distillate	Additive	Refined Product	Blending	Distillate	Additive	
Benzene	0.41%	0.46%	0.2157%	-	1.80%	2.00%	0.0008%	-	
Ethylbenzene	0.14%	0.14%	0.3114%	26.47%	2.00%	2.00%	0.0130%	23.00%	
Hexane	3.96%	3.96%	0.0449%	-	12.00%	12.00%	0.0001%	-	
Isooctane	0.63%	0.63%	-	-	4.00%	4.00%	-	-	
Toluene	0.87%	0.87%	2.3887%	-	7.00%	7.00%	0.0320%	-	
Xylene (-m)	0.67%	0.67%	5.7760%	73.53%	7.00%	7.00%	0.2900%	77.00%	
Naphthalene	0.0516%	0.0516%	0.0516%	-	0.1000%	0.1000%	0.1000%	-	
Methanol*	1.18%	0.00%	1.18%	-	2.00%	0.00%	2.00%	-	

*Biofuels only

					Tank N	umbers				
	117	119	120	121	114	115	118	39	31	32
Tank Diameter (ft)	110	80	80	150	120	150	100	125	125	125
Heel Height (ft)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume (ft3)	38,013	20,106	20,106	70,686	45,239	70,686	31,416	49,087	49,087	49,087
Volume (bbl)	6,771	3,581	3,581	12,590	8,058	12,590	5,596	8,743	8,743	8,743
Volume (gal)	284,377	150,414	150,414	528,800	338,432	528,800	235,022	367,222	367,222	367,222
Volume (liters)	1,076,367	569,318	569,318	2,001,509	1,280,966	2,001,509	889,560	1,389,937	1,389,937	1,389,937
Avg Temp (F) (T)	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18
Avg Temp (K) (T)	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47
temp corr	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568
Moles	45,978	24,319	24,319	85,496	54,718	85,496	37,998	59,372	59,372	59,372
VP of VOC (psia)	6.62	6.62	6.62	6.62	6.62	6.62	6.62	6.62	3.72	3.72
VOC theo fraction	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.25	0.25
Saturation Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Moles VOC	12,424	6,571	6,571	23,102	14,785	23,102	10,267	16,043	9,024	9,024
Molecular weight (g/g-mole)	61.00	61.00	61.00	61.00	61.00	61.00	50.00	61.00	49.82	49.82
VOC (grams/landing)	757,841	400,841	400,841	1,409,208	901,893	1,409,208	513,373	978,617	449,541	449,541
VOC (lbs/landing)	1,670.73	884	884	3,107	1,988	3,107	1,132	2,157	991	991
Number of Landings per Yr	2	2	2	2	1	2	2	3	2	2
Average Days per Landing	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
VOC (lbs) Filling	3,341	1,767	1,767	6,213	1,988	6,213	2,264	6,472	1,982.10	1,982.10
VOC (Ibs) Standing	1,016	537	537	1,889	604	1,889	688	1,968	602.56	602.56
Total VOC (lbs) (Lf + Ls)	4,357	2,305	2,305	8,102	2,593	8,102	2,952	8,440	2,585	2,585
Total VOC (tons)	2.18	1.15	1.15	4.05	1.30	4.05	1.48	4.22	1.29	1.29

*Modeled as Ethanol Only

**Modeled as Crude Oil Only

_	Fraction		lbs/yr									
Total VOC	100.00%	4,357	2,305	2,305	8,102	2,593	8,102	2,952	8,440	2,585	2,585	
Benzene	0.41%	20	11	9	37	12	37	14	34	10	10	
Ethylbenzene	0.14%	6	3	3	11	4	11	4	12	4	4	
Hexane (-n)	3.96%	173	91	91	321	103	321	117	334	102	102	
Iso-octane	0.63%	27	15	15	51	16	51	19	53	16	16	
Toluene	0.87%	38	20	20	70	23	70	26	73	22	22	
Xylene (-m)	0.67%	29	16	16	55	17	55	20	57	17	17	
Naphthalene	0.05%	2	1	1	4	1	4	2	4	1	1	
Methanol	1.18%	51	27	27	96	31	96	35	100	30	30	
Total HAP Species	7.90%	347	183	182	645	206	645	235	667	204	204	
Non Hap VOC	92.10%	4,010	2,121	2,122	7,458	2,386	7,457	2,717	7,773	2,380	2,380	

NOTE: Landing emissions calculated using methodology from API Technical Report 2567 - Evaporative Loss from Storage Tank Floating Roof Landings.

Fuel Combustion Emissions

Existing Exempt Combustion Sources:

Unit ID	Product	Source	Gal/yr (Liquid)	SCF/yr (Gas)	Liters/year (Gas)	MMBTU/yr
NA	Distillate	Furnace	590			-
NA	Natural Gas	Boiler (water bldg)	-			54
NA	Natural Gas	Boiler (garage)	-			22
NA	Natural Gas	Boiler (office)	-			163
NA	Natural Gas	Furnace	-			120

Proposed Exempt Combustion Sources:

Unit ID	Product	Source	Gal/yr (Liquid)	SCF/yr (Gas)	Liters/year (Gas)	MMBTU/yr
NA	Natural Gas	Heater (line trace)	-			35,040
NA	Natural Gas	Boiler (line trace)	-			35,040
NA	Natural Gas	Boiler (tanks)	-			52,560
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724

Existing Non-Exempt Combustion Sources:

VCUML/VCUM2/VCURR*	Natural Gas	VCU	1		200,000
*Includes natural gas used as assis	t gas for both marine \	CUs (VCUML and V	CUM2) and the	rail VCU (VCURR)	

Distillate Combustion Emissions:

					Combustion	Emissions			
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	
Emission Factor - lb/1000 gal*	2.00	52.54	20.00	0.20	5.00	0.22	0.26	2.2E+04	(CH4*25)+(N2O*298)+
lb/yr	1.18	31.00	11.80	0.12	2.95	0.13	0.15	13157.00	1
tons/yr	0.00	0.02	0.01	0.00	0.00	0.00	0.00	6.58	
* Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I. SOx, Nox, CO, and PM									

Emission Factors are from Table 1.3-1. VOC Emission Factor is from Table 1.3-3. CO2 Emission Factor is from Table 1.3-12.

** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example calculation (using SOx):

= gal/yr / 1000 gal * Emission Factor

= 590 gal/yr / 1000 gal * 52.54 lb/1000 gal (SOx)

= 31.00 lb/yr

Natural Gas Combustion Emissions (from existing sources)*:

	Combustion Emissions									
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**	
Emission Factor - Ib / MM BTU**	0.0075	0.00059	0.098	0.0054	0.082	0.002	0.002	117.647	(CH4*25)+(N2O*298)+(CO2*1	
lb/yr	1,492.87	117.86	19,643.04	1,080.37	16,500.15	451.79	432.15	23,571,647.06	23,711,721.5	
tons/yr	0.75	0.06	9.82	0.54	8.25	0.23	0.22	11,785.82	11,855.8	

*Total emissions from natural gas combustion from existing sources include emissions from the combustion of natural gas in furnaces and boilers and emissions from the combustion of natural gas used as assist gas in the VCUs.

** Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Tables 1.4-1, 1.4-2, and 1.4-3, except for GHG.

*** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example Calculation (using SOx):

= Total Natural Gas Used * Emission Factor

= Total Natural Gas Used (200,359) MMBTU/yr * 0.00059 lb / MM BTU

= 458 lb/yr

Natural Gas Combustion Emissions (from proposed sources)*:

					Compustion I	Emissions			
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	1
Emission Factor - Ib / MM BTU**	0.0075	0.00059	0.098	0.0054	0.082	0.002	0.002	117.647	(CH4*25)+(N2O*298
lb/yr	3,498.50	276.20	46,032.94	2,531.81	38,667.67	1,058.76	1,012.72	55,239,529.41	55,5
tons/vr	1 75	0 14	23.02	1 27	19 33	0.53	0.51	27 619 76	

*Total emissions from natural gas combustion from proposed sources include emissions from the combustion of natural gas in proposed boilers.

** Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Tables 1.4-1, 1.4-2, and 1.4-3, except for GHG.

*** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example Calculation (using SOx):

= Total Natural Gas Used * Emission Factor

= Total Natural Gas Used (469,536) MMBTU/yr * 0.00059 lb / MM BTU

= 458 lb/yr





VCU Vapor Combustion Emissions

(Emissions from Combustion of Petroleum Product Loaded)

Petroleum Vapor Combusted (Ibs):

3,716,777 Total

1,439,100 at VCUML (gasoline and ethanol loading) (See Marine Loading - Gas & Eth Calculations.)

809,804 at VCUM2 (crude loading) (See Marine Loading - Crude Oil Calculations.)

1,467,873 at VCURR (gasoline loading) (See Rail Loading - Gas & Eth Calculations.)

Conversion from Petroleum Vapor Combusted in lbs to MMSCF (as Natural Gas Equivalent):

MMSCF (as Natural Gas) = Petroleum Vapor Combusted (lbs) * (21,000 BTUs / lb gasoline (high avg. for C4-C8 gases)(/ (1000 BTU/SCF) / (1,000,000)

MMSCF (as Natural Gas) combusted at VCUML = 37

MMSCF (as Natural Gas) combusted at VCUM2 = 51

MMSCF (as Natural Gas) combusted at VCURR = 31

Marine VCU Emissions from Gasoline & Ethanol Loading (Emission Unit VCUML):

			Compussion Emissions								
F	Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2		
E	Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*298	
1	b/yr	229.68	229.68	5,967.82	4,533.17	NA	69.51	2,538.57	3,626,532.00	4,3	
t	tons/yr	0.11	0.11	2.98	2.27	NA	0.03	1.27	1,813.27		

Marine VCU Emissions from Crude Oil Loading (Emission Unit VCUM2):

	Combustion Emissions								
Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2	GHG
Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*298)+(CO2*1)
lb/yr	129.24	129.24	3,358.19	2,550.88	NA	39.11	1,428.49	2,040,706.95	2,467,376.25
tons/yr	0.06	0.06	1.68	1.28	NA	0.02	0.71	1,020.35	1,233.69

Rail VCU Emissions from Gasoline & Ethanol Loading (Emission Unit VCURR):

	Combustion Emissions									
Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2		
Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*29	
lb/yr	234.27	234.27	6,087.14	4,623.80	NA	70.90	2,589.33	3,699,039.96	4	
tons/yr	0.12	0.12	3.04	2.31	NA	0.04	1.29	1,849.52		

* These emissions are from gasoline and crude oil vapor combustion and pilot light gas. Gasoline and crude oil VOCs are already accounted for in the VCU emissions (i.e. 2 mg/l loaded or 98% efficiency).
** PM Emission Factor is from AP-42 (Table 1.4-2), as it is higher than the Emission Factor from the VCU manufacturer of zero (0). SOx Emission Factor is calculated as described below. NOx Emission Factor is from VCU manufacturer, as it is higher than the AP-42 Emission factor of 140 lbs/MMSCF (Table 1.4-1). CO Emission Factors is identical from VCU manufacturer and AP-42 (Table 1.4-1). GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example calculation of SOx Emission Factor:

SOx Emission Factor = $y_{H2S} * (1/C) * M_{SO2} * MW_{SO2}$

(Equation from EPA Emission Inventory Improvement Program (EIIP) Document Volume 3, Ch.10: Preferred & Alternative Methods for Estimating Air Emissions from Oil and Gas Field Production & Processing Operations, Sept. 1999, Pg 10.2-16.)

y _{H2S, crude oil} =	0.001	(mole fraction of H2S in inlet gas (Ib mole H2S/ Ib mole) based on 10 ppm H2S liquid concentration)
C =	379.00	(molar volume of ideal gas at 60F and 1atm (scf/lb-mole))
M =	0.99	(molar conversion ratio from H2S to SO2 (lb-mole SO2/lb-mole H2S) (From VCU Manufacturer))
MW =	64.066	(molecular weight of SO2 (lb SO2/lb-mole SO2))
EF _{SOX,crude oil} =	197.47	lb/ MMSCF

Total of Combustion Sources

Pollutant	PM	PM10	SOx	NOx	VOC	CH4	CO	CO2	
lb/yr	5,585.75	1,018.25	81,100.93	15,320.15	55,170.77	1,690.20	8,001.42	88,190,612.38	90,6
tons/yr	2.79	0.51	40.55	7.66	27.59	0.85	4.00	44,095.31	



GHG
b)+(CO2*1)
172,432.15
2,236.22



Emergency Generators (Exempt)

Emergency Generator Sources:

Fuel Type	Source	Gal/hr (Liquid)	SCF/hr (Gas)	Gal/hr (Gas)	MMBTU/hr*
Propane	QT100 Generator	13.9			1.26
Propane	QT100 Generator	13.9			1.26
Natural Gas	20kw NG Generator		1,020		1.02
Diesel	500kw	26.1			
Diesel	350kw	18.5			
Diesel	350kw	18.5			

*Generac Spec Sheet states, "For BTU content multiply gal/hr x 90950 (LP) or ft3/hr x 1000 (NG)."

Distillate Fired Engine Emissions:

	Pollutant								
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**
Factor - lb/1000 gal*	2.00	52.54	20.00	0.20	5.00	0.22	0.26	2.2E+04	(CH4*25)+(N2O*298)+(CO2*1)
lb/yr	63.10	1,657.64	631.00	6.31	157.75	6.81	8.20	703,565.00	706,179.86
tons/yr	0.03	0.83	0.32	0.00	0.08	0.00	0.00	351.78	353.09

* Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I. SOx, Nox, CO, and

PM Emission Factors are from Table 1.3-1. VOC Emission Factor is from Table 1.3-3. CO2 Emission Factor is from Table 1.3-12.

** GHG Emission calculated by using the CO2 Equivalency Factors for CH4 (25), N2O (298) and CO2 (1).

Example calculation:

= gal/yr / 1000 gal * emission factor

Natural Gas & Propane Fired Engine Emissions:

		Ibs Pollutant / MM BTU								
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**	
Factor*	0.0099	0.0006	2.270	0.0296	3.720	0.230	0.2	110.0	(CH4*25)+(N2O*298)+(CO2*1)	
lb/yr	17.58	1.04	4,027.45	52.52	6,600.04	408.07	408.07	195,162.55	326,968.24	
tons/yr	0.01	0.00	2.01	0.03	3.30	0.20	0.20	97.58	163.48	

* Emission factors used to estimate emissions are from AP-42 Table 3.2-3.

** GHG Emission calculated by using the CO2 Equivalency Factors for CH4 (25), N2O (298) and CO2 (1).

Example Calculation of Natural Gas Useage

= Natural Gas Used

= Natural Gas Used * Emission factor

1,774 MMBTU/yr

Total of Generator Sources

Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG
lb/yr	80.68	1,658.68	4,658.45	58.83	6,757.79	414.88	416.27	898,727.55	1,033,148.10
tons/yr	0.04	0.83	2.33	0.03	3.38	0.21	0.21	449.36	516.57

H2S Calculations

12S Liquid Conc. (ppm)	10	
12S Vapor Fraction	0.00118	(from EPA TANKS 4.09d)
CUM2 VOC Emissions	3.76	tpy (from Load-Marine tab of PTE)
acility Fugitives (light liquid)	2937.65	lbs/yr (from Facility Fugitives tab of PTE)
FR Tank Emissions (inc. landings)	144198.63	Ibs/yr (from Emission Summary tab of PT

Point Sources

	Emission Rate (tpy)
Emission Unit	(VCUM2 Emissions x H2S Vapor Fraction)
VCUM2	0.00

Volume Sources (Tanks)

	Emission Rate (tpy)
Emission Unit	(IFR Tank Emissions x H2S Vapor Fraction)
TANKS	0.085

Area Sources (Fugitives)

Emission Unit	Emission Rate (tpy)
Facility Fugitives	0.002

Total H2S Emissions (tpy)

0.091

Note: Hydrogen sulfide is the most prevalent of the total reduced sulfurs, and therefore all TRS is assumed to be H2S.

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Estimate of Particulate Matter (PM-2.5) Emissions

Paved Roads - Emission Factor Derived from AP-42: 13.2.1	(01/11) (accounts for resuspended road material)
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Eext =	[k (sL) ^{0.91} x (W) ^{1.02}] (1 - P/4N)			
Where:				
= Annual size sp	ecific emission factor extrapolated for r	natural mitigation (lb/\	/MT)	
k = PM-2.5 multipli	ier (lb/VMT) = 0.00054	lb/VMT (Table 1	13.2-1.1)	
sL* = Road Surface S	Silt Loading (g/m ²) =	1.1	g/m ² (Table 13.2.1-3)	
W = Mean Vechicle	e Weight (tons)			
P = Number of pred	cipitation days per year (>0.01 in precip	vitation) =	138	da
N = Number of day	s in the averaging period =	365	days (Annual Average)	

*Given the industrial processes listed in Table 13.2.1-3, operations at a terminal were determined to be closest to those at a corn wet mill. Therefore, the silt

Paved Roads - Emission Factor Derived Using EPA MOVES Model (includes vehicle exhaust, brake wear, and tire wear)

Assumptions Used in Model:	
Scale:	National (utilizes data from EPA databases)
Year Selected:	2013
Months Selected:	All Months
Hours Selected:	All Hours
Time Aggregation Level:	Hourly
Geographic Bounds:	Albany County
Vehicle Selected:	Combination long-haul truck
Fuel Selected:	Diesel Fuel
Road Type:	Urban, Restricted Access
Emissions Accounted for:	Running exhaust, crankcase running exhaust, brake wear, tire wear
Calculation of Number of Tanker Trucks at Facility	y Per Day
10,500.00 gallons	=storage capacity of each truck
373,192,668.00 gallons	=throughput of product at the truck rack in 2013
35,542.16 trucks per year	=trucks entering the facility in 2013 (product loaded at the truck rack/storage capacity of each truck)
35,543 trucks per year	
97.38 trucks per day	=trucks entering the facility each day (trucks per year/365)
98 trucks per day	
Calculation of Average Tanker Truck Weight	
80000 pounds	=loaded weight of smaller tanker trucks used (information obtained from terminal)
102000 pounds	=loaded weight of larger tanker trucks used (information obtained from terminal)
91000 pounds	=average weight of truck travelling through terminal (conservatively assume that half of the trucks are the larger tru conservatively assume that trucks are at their loaded weight when entering and exiting the facility)
45.5 tons	=average weight of truck traveling through terminal
Road Length - Paved Roads	
18550 inches	=length of paved road traveled by trucks, determined using facility site plan
1545.83 feet	=length of paved road traveled by trucks
0.29 miles	=length of paved road traveled by trucks

days (Albany, NY data)

trucks,

Estimate of Particulate Matter (PM-2.5) Emissions

Paved Roads - Emission Factors Derived from AP-42: 13.2.1 (01/11) and EPA MOVES Model

<u>Tanker Trucks (TT):</u> 98	Tanker trucks	per day		===>	Average weight =	45.5
98						45.5
Length of Paved Roads: L(TT) =	0.2	9 miles	Length of par	ved road tanker trucks trav	vel on one way.	
<u>Emission Factors:</u> E(TT) = E(EPA MOVES) =	0.02 4.09216E-0	6 Ib/VMT 6 Ib/VMT	Emission Fac Average hou	ctor derived from AP-42, V rly emission factor resultin	olume 1, Fifth Edition, Section g from MOVES run	on 13.2.1 (January 2
Emission Factor (total) =	0.02	6 lb/VMT	Sum of AP-4	2 and EPA MOVES Emiss	sion Factors	
Estimate of Particulate N Tanker Truck:	latter (PM-2.5) 98	<u>Emissions:</u> Trips/day	1	ways		
E(TT) =	0.75	lb PM-2.5/day				
TOTAL =	0.75	lb PM-2.5/day	-			
	0.14	tons PM-2.5/y	ear			

tons

tons

/ 2011)

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.2 (11/06)

Where:							
		= Annua	I size specific e	mission factor extrapolated for natura	al mitigation (lb/\	VMT)	
	S*	= Surfac	e material silt c	ontent (%) =	4.3	(Table 13.2.2-1)	
	W	= Mean V	√ehicle Weight	(tons)			
	k	=	0.15	lb/VMT (Table 13.2.2-2)			
	а	=	0.9	(Table 13.2.2-2)			
	b	=	0.45	(Table 13.2.2-2)			
	Р	= Numbe	er of precipitation	on days per year (>0.01 in percipitatio	n) =	138	days (Albany

*The unpaved road at the terminal was determined to have a silt content most similar to a service road. The silt content given for a taconite

Estimated Number of Trucks at Facility Per Day

5 trucks per day assume one maintenance crew on site each day with one truck entering and exiting the facility approximately five times each day

Average Truck Weight

5000 lbs 2.5 tons average weight of a light duty pickup truck (maintenance truck)

Road Length - Unpaved Roads

1500 feet estimated distance driven by each maintenance truck on each trip through the terminal 0.28 miles

ny, NY data)

2.5

2.5

Estimate of Particulate Matter (PM-2.5) Emissions

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.1 (11/06)					
<u>Maintenance Tre</u> 5	<mark>ucks (MT):</mark> Maint	enance Trucks pe	er day	===>	Average weight =
5					
<u>Length of Unpav</u> L(MT) =	<u>ved Roads:</u>	0.28 miles	Length of unpaved road	d maintenance	trucks travel on one way.
<u>Emission Factor</u> E(MT) =	<u>'S:</u>	0.034 lb/VMT			

Estimate of Particulate Matter (PM-2.5) Emissions:						
Maintenance Truck:	5	Trips/day	1	ways		
	0.05	Ib DM 2 5/day				
$\Box(WT) =$	0.05	ID FIVI-2.5/udy				
TOTAL =	0.05	lb PM-2.5/day				
	0.01	tons PM-2.5/year	•			

Estimate of Particulate Matter (PM-2.5) Emissions

Total PM-2.5 Emissions:

0.14 tons/year 0.01 tons/year	total PM-2.5 emissions from tanker trucks traveling on paved roads total PM-2.5 emissions from maintenance vehicles traveling on unpaved roads
0.15 tons/year	total fugitive PM-2.5 emissions from facility roads

tons tons

Estimate of Particulate Matter (PM-10) Emissions

Paved Roads - Emission Factor Derived from AP-42: 13.2.1 (01/11) (accounts for resuspended road material)

		Eext = $[k (sL)^{0.91}]$	x (W) ^{1.02}] (1 - P/4N)				
Where:		A	f				
		= Annual size specific emission	factor extrapolated to	or natural mitigatio	n (ID/VIVI I)		
	k	= PM-10 multiplier (lb/VMT) =	0.0022	lb/VMT (Tab	le 13.2-1.1)		
	sL*	= Road Surface Silt Loading (g/i	m²) =	1.1	g/m ² (Table 13.2.1-3	3)	
	W	= Mean Vechicle Weight (tons)	,		0	,	
	Р	= Number of precipitation days p	per year (>0.01 in pre	cipitation) =		138	days
	N	= Number of days in the averagi	ng period =	365	days (Annual Avera	ge)	

*Given the industrial processes listed in Table 13.2.1-3, operations at a terminal were determined to be closest to those at a corn wet mill. Therefore, the silt

Paved Roads - Emission Factor Derived Using EPA MOVES Model (includes vehicle exhaust, brake wear, and tire wear)

tire wear
tire wear

Calculation of Number of Tanker Trucks at Facility Per Day

10,500.00 gallons	=storage capacity of each truck
373,192,668.00 gallons	=throughput of product at the truck rack in 2013
35,542.16 trucks per year	=trucks entering the facility in 2013 (product loaded at the truck rack/storage capacity of each truck)
35,543 trucks per year	
97.38 trucks per day	=trucks entering the facility each day (trucks per year/365)
98 trucks per day	
Calculation of Average Tanker Truck Weight	

80000 pounds	=loaded weight of smaller tanker trucks used (information obtained from terminal)
102000 pounds	=loaded weight of larger tanker trucks used (information obtained from terminal)
91000 pounds	=average weight of truck travelling through terminal (conservatively assume that half of the trucks are the lan conservatively assume that trucks are at their loaded weight when entering and exiting)
45.5 tons	=average weight of truck traveling through terminal
Road Length - Paved Roads	
18550 inches	=length of paved road traveled by trucks, determined using facility site plan
1545.83 feet	=length of paved road traveled by trucks
0.29 miles	=length of paved road traveled by trucks

/s (Albany, NY data)

arger trucks,

Estimate of Particulate Matter (PM-10) Emissions

Paved Roads - Emission Factors Derived from AP-42: 13.2.1 (01/11) and EPA MOVES Model

	0.56	tons PM-10/ye	ear					
TOTAL =	3.06	lb PM-10/day	-					
E(TT) =	3.06	lb PM-10/day						
Estimate of Particulate Tanker Truck:	<u>Matter (PM-10)</u> 98	<u>Emissions:</u> Trips/day	1	ways				
Emission Factor (total) =	0.10	07 lb/VMT	Sum of AP-42 ar	nd EPA MOV	ES Emissior	n Factors		
<u>Emission Factors:</u> E(TT) = E(EPA MOVES) =	0.10 5.507E-0	07 Ib/VMT 06 Ib/VMT	Emission Factor Average hourly e	derived from emission facto	AP-42 or resulting f	rom MOVES run		
Length of Paved Roads L(TT) =	<u>s:</u> 0.2	29 miles	Length of paved	road tanker t	rucks travel	on one way.		
98							45.5	
<u>Tanker Trucks (TT):</u> 98	Tanker trucks	s per day			===>	Average weight =	45.5	

tons

tons

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.2 (11/06)

Where:						
		= Annual size specific	emission factor extrapolated for natura	al mitigation (lb/V	MT)	
s	;	= Surface material silf	t content for MSW Lanfills (%) =	4.3	(Table 13.2.2-1)	
v	1	= Mean Vehicle Weig	ht			
k	ζ	= 1.5	lb/VMT (Table 13.2.2-2)			
а	l	= 0.9	(Table 13.2.2-2)			
b)	= 0.45	(Table 13.2.2-2)			
P)	= Number of precipita	tion days per year (>0.01 in percipitatio	n) =	138	days (Alban

*The unpaved road at the terminal was determined to have a silt content most similar to a service road. The silt content given for a taconite

Estimated Number of Trucks at Facility Per Day

5 trucks per day assume one maintenance crew on site each day with one truck entering and exiting the facility approximately five times each day

Average Truck Weight

5000 lbs 2.5 tons average weight of a light duty pickup truck (maintenance truck)

Road Length - Unpaved Roads

1500 feet 0.28 miles estimated distance driven by each maintenance truck on each trip through the terminal

ny, NY data)

Estimate of Particulate Matter (PM-10) Emissions

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.1 (11/06)

<u>Mair</u>	itenance Trucks (5	(MT): Maintenance	Trucks per day	===>	Average weight =	2.5
					/	
	5					2.5
Long	th of Uppavod P	ooder				
L(M1	_) =	0.28	miles Length of unpave	ed road maintenan	ce trucks travel on one way.	
Emis E(M	sion Factors:	0 341	ΙЬ//МТ			
E (111	,	0.011				
<u>Esti</u>	nate of Particulat	te Matter (PM-1	0) Emissions:			
Main	tenance Truck:	5	Trips/day 1 v	vays		
	Γ) —	0.49	Ib PM 10/day			
	r) –	0.40	ib Fivi-To/day			
TOT	AL =	0.48	lb PM-10/day			
		0.09	tons PM-10/year			
Particula	te Matter (PM-10) Emissions				
) Emissio	ns:					
		56 tops/year	total DM 10 omissions from	tankar trucka trava	ling on poved reads	
	0.0	o ions/year			ing on paveu luaus	

0.65 tons/year total fugitive PM-10 emissions from facility roads

tons

tons

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

OS1 - Marine loading with 2 mg/L with vac assist

Throughput:	<mark>369</mark>	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	3.9000	369	1,439,100	0	1,439,100	6,159	6,159	3.08

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

		Loading Rack	0% Remaining			Total	
Emission Factor*	Throughput	Emissions	after 100%		2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/hr)	goes to VCU	100% to VCU	from VCU	(lbs/hr)	(tons/hr)
3.9000	1.05	4095	0	4095	82	82	0.04

EMISSIONS FROM MARINE LOADING OF GAS/ETH: ALTERNATIVE OPERATING SCENARIC

OS2 - Marine loading with no vac assist, assumes 99.9% collection

Throughput:	299	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (Ib/yr)	0.1% Fugitive Emission after 99.9% goes to VCU	99.9% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	3.9000	299	1,165,671	1,166	1,164,505	4,989	6,154	3.08

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

299 / 369 = 0.81

(from OS2) / (from OS1) = 0.81

			0.1% Fugitive				
		Loading Rack	Emission after			Total	
Emission Factor*	Throughput	Emissions	99.9% goes to	99.9% to	2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/hr)	VCU	VCU	from VCU	(lbs/hr)	(tons/hr)
3.9000	1.05	4095	4	4095	18	22	0.01

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

OS3 - Marine loading with VCU at 10 mg/L, with vac assist.

Throughput: 74 Mmgal

Control Device Emission Rate:

equal to: 0.0835 lbs/1000 gallons

Loading into an Uncleaned Barge:	
----------------------------------	--

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

10 mg/L

Max Emissions Per Hour:

4,000 barrels / hr 168,000 gal / hr

		Loading Rack	0% Remaining			Total	
Emission Factor*	Throughput	Emissions	after 100%		2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/yr)	goes to VCU	100% to VCU	from VCU	(lbs)	(tons)
3.9000	74	287,820	0	287,820	6,159	6,159	<mark>3.08</mark>

74 / 369 = 0.2 (from OS3) / (from OS1) = 0.2

		Loading Rack	0% Remaining			Total	
Emission Factor*	Throughput	Emissions	after 100%		2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/hr)	goes to VCU	100% to VCU	from VCU	(lbs/hr)	(tons/hr)
3.9000	0.17	655	0	655	14	14	0.01

Truck Loading - Gasoline

OS1 - Truck loading with 2 mg/L and vac assist

				Loading Lo	sses 2mg/l	Tank-truck	loss 0 mg/l*	Тс	otal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	880.0	Total VOC	100.00%	14,686	7.343	-	-	14,686	7.343
		Benzene	0.41%	60	0.030	0	-	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	20	0.010	0	-	20	0.010
(VPI I Emission Pating is guaranteed by the		Hexane (-n)	3.96%	582	0.291	0	-	582	0.291
manufacturer of the VRU and verified with a		Iso-octane	0.63%	92	0.046	0	-	92	0.046
Performance Stack Test every 5 years.)		Toluene	0.87%	128	0.064	0	-	128	0.064
		Xylene (-m)	0.67%	99	0.049	0	-	99	0.049
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	8	0.004	0	-	8	0.004
		Methanol	1.18%	173	0.087	0	-	173	0.087
Controlled gasoline Loading Losses (lb/yr)	14,686	Total HAP Species*	7.90%	1,161	0.580	-	-	1,161	0.580
		Non Hap VOC	92.10%	13,526	6.763	-	-	13,526	6.763
		Total VOC		14,686	7.343	-	-	14,686	7.343
		Total HAP		1,161	0.580	-	-	1,161	0.580
		Largest Single HAP							
		Hexane (-n)		582	0.291	-	-	582	0.291

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

TRUCK LOADING OF GASOLINE - ALTERNATIVE OPERATING SCENARIO

				Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	Tot	al
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	176.0	Total VOC	100.00%	2,937	1.469	11,749	5.874	14,686	7.343
		Benzene	0.41%	12	0.006	48	0.024	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	4	0.002	16	0.008	20	0.010
(VRU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	116	0.058	465	0.233	582	0.291
manufacturer of the VRU and verified with a Performance Stack Test every 5 years.)		Iso-octane	0.63%	18	0.009	73	0.037	92	0.046
		Toluene	0.87%	26	0.013	102	0.051	128	0.064
		Xylene (-m)	0.67%	20	0.010	79	0.040	99	0.049
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	2	0.001	6	0.003	8	0.004
		Methanol	1.18%	35	0.017	139	0.069	173	0.087
Controlled gasoline Loading Losses (lb/yr)	2,937	Total HAP Species*	7.90%	232	0.116	928	0.464	1,161	0.580
		Non Hap VOC	92.10%	2,705	1.353	10,820	5.410	13,526	6.763
		Total V	/OC	2,937	1.469	11,749	5.874	14,686	7.343
		Total F	Total HAP		0.116	928	0.464	1,161	0.580
		Largest Single HAP							
		Hexane (-n)		116	0.058	465	0.233	582	0.291

	2,937	1.409	11,
Total HAP	232	0.116	
Largest Single HAP			
Hexane (-n)	116	0.058	

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

OS4 - Truck loading with 2 mg/L, no vac assist, assumes 8 mg/L fugitive emissions

176 / 880 = 0.2

(from OS4) / (from OS1) = 0.2

OS1 - Rail loading with 2 mg/L and vac assist

				Loading Losses 2mg/I		Tank-truck	Tank-truck loss 8 mg/l		tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	300.0	Total VOC	100.00%	5,007	2.503	-	-	5,007	2.503
		Benzene	0.41%	20	0.010	0	-	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	7	0.003	0	-	7	0.003
(VCU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	198	0.099	0	-	198	0.099
manufacturer of the VCU and verified with a		Iso-octane	0.63%	31	0.016	0	-	31	0.016
Performance Stack Test every 5 years.)		Toluene	0.87%	43	0.022	0	-	43	0.022
		Xylene (-m)	0.67%	34	0.017	0	-	34	0.017
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	3	0.001	0	-	3	0.001
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	59	0.030	0	-	59	0.030
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	396	0.198	-	-	396	0.198
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	4,611	2.306	-	-	4,611	2.306
Table 5.2-5), multiplied by the leakage rate of									
0.8% (AP-42, Compilation of Air Pollutant		Total VO	С	5,007	2.503	-	-	5,007	2.503
Emission Factors, still Ed., vol. 1))		Total HA	Р	396	0.198	-	-	396	0.198
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	5,007	Hexane (-n)		198	0.099	-	-	198	0.099

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

OS5 - Rail loading with 2 mg/L and no vac assist, assumes 8 mg/L fugitives

RAIL LOADING OF GASOLINE - ALTERNATIVE OPERATING SCENARIO

				Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	То	tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	60.0	Total VOC	100.00%	1,001	0.501	4,005	2.003	5,007	<mark>2.503</mark>
		Benzene	0.41%	4	0.002	16	0.008	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	1	0.001	6	0.003	7	0.003
(VCU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	40	0.020	159	0.079	198	0.099
manufacturer of the VCU and verified with a		Iso-octane	0.63%	6	0.003	25	0.013	31	0.016
Performance Stack Test every 5 years.)		Toluene	0.87%	9	0.004	35	0.017	43	0.022
		Xylene (-m)	0.67%	7	0.003	27	0.013	34	0.017
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	1	0.000	35	0.017	35	0.018
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	12	0.006	27	0.013	39	0.019
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	79	0.040	329	0.164	408	0.204
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	922	0.461	3,676	1.838	4,599	2.299
Table 5.2-5), multiplied by the leakage rate of 0.8%									
(AP-42, Compilation of Air Pollutant Emission		Total V0	C	1,001	0.501	4,005	2.003	5,007	2.503
Factors, still Ed., vol. I		Total H	AP	79	0.040	329	0.164	408	0.204
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	1,001	Hexane (-n)		40	0.020	159	0.079	198	0.099

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

60 / 300 = 0.2

(from OS5) / (from OS1) = 0.2

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

OS1 - Crude marine loading with 2 mg/L and vac assist

Throughput:	450	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gall	ons		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	1.7996	450	809,804	0	809,804	7,511	7,511	3.76

* Emission Factor calculated below, per AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 5.2, Equation 2.

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

	Emission Factor (lb/1000 gal)	Throughput (Mmgal)	Emissions (lb/hr)	after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Emissions (lbs/hr)	Total Emissions (tons/hr)	
	1.7996	1.05	1890	0	1890	18	18	0.01	J
Emission Factor Calculation from AP	-42:	CL =	Ca +	Cg	where:				
		1.80	0.86	0.94		CL = Total I	oading loss, Lomission fo	lb/1,000 gal of crude (oil loaded.
Cg Formula Inputs:	Vapor Pressure	12.5	(from EPA Tan	ks 4.09d)		contributed	d by vapors i	n the empty tank	<i>>),</i>
	Vapor Growth Factor	50 1 02	(from EPA Tan (from AP-42)	ks 4.09d)		compartme	ent before lo	ading, Ib/1,000 gai of	crude
	Temperature *R	507.37	(from EPA Tan	ks 4.09d)		Cg = Calcul contributed lb/1,000 ga	ated emissio d by evapora Il loaded.	n factor (from Equatic tion during loading,	on 3),

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

OS3 - Crude marine loading with 10 mg/L VCU and vac assist

Throughput:

Control Device Emission Rate:

equal to:	0.0835 lbs/1000 gallons

			Loading Rack	0% Remaining			Total	
	Emission Factor*	Throughput	Emissions	after 100%	100% to	2 mg/L	Emissions	Total Emissions
Loading into an Uncleaned Barge:	(lb/1000 gal)	(Mmgal)	(lb/yr)	goes to VCU	VCU	from VCU	(lbs)	(tons)
	1.7996	90	161,961	0	161,961	7,511	7,511	<mark>3.76</mark>

* Emission Factor calculated below, per AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 5.2, Equation 2.

90 Mmgal

10 mg/L

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

007 100 0.2	90 /	450 =	0.2
-------------	------	-------	-----

(from OS3) / (from OS1) = 0.2

			Loading Rack	0% Remaining			Total		
	Emission Factor	Throughput	Emissions	after 100%	100% to	2 mg/L	Emissions	Total Emissions	
	(lb/1000 gal)	(Mmgal)	(lb/hr)	goes to VCU	VCU	from VCU	(lbs/hr)	(tons/hr)	
	1.7996	1.05	1890	0	1890	88	88	0.04	
Emission Factor Calculation from AP-42	2:	CL =	Ca +	Cg	where:				
		1.80	0.86	0.94		CL = Total l	oading loss,	lb/1,000 gal of crude of	oil loaded.
						Ca = Arriva	l emission fa	ctor (from Table 5.2-3	3),
Cg Formula Inputs:	Vapor Pressure	12.5	(from EPA Tan	ks 4.09d)		contributed	d by vapors i	n the empty tank	
	Molecular Weight	50	(from EPA Tan	ks 4.09d)		compartme	ent before lo	ading, lb/1,000 gal of	crude
Va	apor Growth Factor	1.02	(from AP-42)			oil loaded.			
	Temperature *R	507.37	(from EPA Tan	ks 4.09d)		Cg = Calcul	ated emissio	n factor (from Equation	on 3),
						contributed	d by evapora	tion during loading,	
						lb/1,000 ga	I loaded.		

Load Crude Oil - Marine

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

In order to minimize the number of ratios in the permit, and to be conservative, the gasoline ratio of 0.81 was used for crude marine loading with no vac assist. If the crude emission factor was used, the ratio allowed would've been higher (0.90 instead of 0.81 proposed, as shown below).

.

Throughput:

Control Device Emission Rate:

equal to: 0.0167 lbs/1000 gallons

			Loading Rack	0% Remaining			Total	
	Emission Factor*	Throughput	Emissions	after 100%	100% to	2 mg/L	Emissions	Total Emissions
Loading into an Uncleaned Barge:	(lb/1000 gal)	(Mmgal)	(lb/yr)	goes to VCU	VCU	from VCU	(lbs)	(tons)
	1.7996	407	732,423	732	732,423	6,793	7,526	3.76

* Emission Factor calculated below, per AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 5.2, Equation 2.

407 Mmgal

2 mg/L

Max Emissions Per Hour:

Emission

25,000 barrels / hr 1,050,000 gal / hr 407 / 450 = 0.9

	Emission Factor (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/hr) 1890	0% Remaining after 100% goes to VCU	100% to VCU 1890	2 mg/L from VCU	I otal Emissions (lbs/hr) 18	Total Emissions (tons/hr)	
	1.7000	1.00	1000	Ŭ	1000	10	10	0.01	ł
Factor Calculation from AP-4	2:	CL =	Ca +	Cg	where:				
		1.80	0.86	0.94		CL = Total l	oading loss, l	lb/1,000 gal of crude o	oil loaded.
						Ca = Arriva	l emission fa	ctor (from Table 5.2-3	3),
Cg Formula Inputs:	Vapor Pressure	12.5	(from EPA Tan	ks 4.09d)		contributed	d by vapors i	n the empty tank	
	Molecular Weight	50	(from EPA Tan	ks 4.09d)		compartme	ent before lo	ading, lb/1,000 gal of	crude
V	apor Growth Factor	1.02	(from AP-42)			oil loaded.			
	Temperature *R	507.37	(from EPA Tan	ks 4.09d)		Cg = Calcul contributed	ated emissio d by evapora	n factor (from Equatic tion during loading,	on 3),
						lb/1,000 ga	al loaded.		

Global Albany Terminal Example Calculation for Proposed Crude Throughput Cap

Faujualant Thrunut -	$-\left(kaal at \frac{2mg}{2}at marine dock\right) + \frac{kg}{2}$	al marine inerted vessels	kgal marine at VCUM1
	$= \left(\frac{kgut}{L} ut \frac{mut}{L} ut mut the uock} \right) + -$	0.81	0.2
Example:	155,000,000 gallons loaded at m	arine dock with vac	OS#CRD1
	22,000,000 gallons marine load	led into inerted vessels	OS#CRD2
	8,000,000 gallons marine load	led with VCUM1 and vac	OS#CRD3
Equivalent Thruput	= 155,000 +(22,000)/0.81+(8,000)/0.2	kgallons	
	= 155,000 + 27,160.5 + 40,000	kgallons	
	= 222,160	kgallons	
Equivalent Thruput	= 222,160,494 gallons		
	= 222.16 Mm gallons		

Global Albany Terminal Example Calculation for Proposed Crude Throughput Cap

Loading at 2mg/L with vac assist:			-					
Throughput (OS#CRD1):	155	Mmgal						
Control Device Emissions Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ons		
Fugitive Emissions Rate:	0	mg/L	equal to:	0.0000	lbs/1000 gallo	ons		
	Emission Factor for VCU (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	Fugitive emissions	Fugitive		Total Emissions (lbs)	Total Emissions (tons)
	0.0167	155	2,587	0	0		2,587	1.29
Total Emissions from loading at 2mg/L = Loading at 2 mg/L into inerted vessels:	1.29 tons C		OS#CRD1					
Throughput (OS#CRD2):	22	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ons]	
	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (Ib/yr)	0.1% Fugitive Emission after 99.9% goes to VCU	99.9% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	3.9000	22	85,800	86	85,714	367	453	0.23

OS#CRD2

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

Total Emissions from loading inerted vessels:

0.23 tons

Global Albany Terminal Example Calculation for Proposed Crude Throughput Cap

Loading at marine with VCUM1:	8	Mmgal	1					
moughput (05#end5).	0	ininger	J					
Control Device Emissions Rate:	10	mg/L	equal to:	0.0835 lbs/1000 gallons]		
Fugitive Emissions Rate:	0	mg/L	equal to:	0.0000	lbs/1000 gallor	ns		
	Emission Factor for VCU (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	Fugitive emissions	Fugitive		Total Emissions (lbs)	Total Emissions (tons)
	0.0835	8	668	0	0		668	0.33
Total Emissions from loading at 10 mg/L = Total emissions from each OS:	OS#CRD3							
Equivalent Throughput:	222.16	Mmgal	1					
			J					
	2 mg/l		л., г		II /4000 II		1	
Control Device Emissions Rate:	2	mg/L	equal to:	0.0167	lbs/1000 galloi	ns		
Control Device Emissions Rate: Fugitive Emissions Rate:	2	mg/L mg/L	equal to: equal to:	0.0167	lbs/1000 gallor lbs/1000 gallor	ns ns		
Control Device Emissions Rate: Fugitive Emissions Rate:	2 0 Emission Factor for VCU (lb/1000 gal)	mg/L mg/L Throughput (Mmgal)	equal to: equal to: Loading Rack Emissions (lb/yr)	0.0167 0.0000 Fugitive emissions	Fugitive	ns ns	Total Emissions (lbs)	Total Emissions (tons)

Total Emissions from loading equivalent	
thruput at 2mg/L =	1.85 tons

Global Albany Terminal Example Calculation for Proposed Throughput Cap

Equivalent Thruput	$= \left(kgal \ at \frac{2mg}{L} \ at \ any \ rack\right) + \frac{kgal \ marine \ inerted \ vessels}{0.81} + \frac{kgal \ marine \ inerted \ vessels}{0.81}$	kgal marine at 0.2	<u>VCUM1</u> +	kgal truck loading with no vac 0.2	+ kgal rail loaded with no vac 0.2
Example:	150,000,000 gallons loaded at truck with vac 25,000,000 gallons loaded at marine with vac (VCUM2) 25,000.000 gallons loaded at rail with vac	200,000,000	OS#1	(This is the sum loaded at the truc	k, marine and rail with vac)
	15,000,000 gallons marine loaded into inerted vessels 12,000,000 gallons marine loaded with VCUM1 and vac 5,000,000 gallons truck loaded with no vac	OS#2 OS#3			
	10,000,000 gallons rail loaded with no vac	15,000,000	OS#4&5	(This is the sum loaded at the tru	ck and rail with no vac)
Equivalent Thruput	= [150,000+25,000+25,000] +(15,000)/0.81+(12,000)/0.2+(5,000)/0. = 200,000 + 18,518.5 + 60,000 + 25,000 + 50,000 = 353,519	.2+(10,000)/0.2	kgallons kgallons kgallons		
Equivalent Thruput	= 353,518,519 gallons= 353.52 Mm gallons				

Global Albany Terminal Example Calculation for Proposed Throughput Cap

Loading at 2mg/L with vac assist:								
Throughput (OS#1):	200	Mmgal						
			-					
Control Device Emissions Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns		
Fugitive Emissions Rate:	0	mg/L	equal to:	0.0000	lbs/1000 gallo	ns	1	
			Rack					
	Emission Factor for	Throughput	Emission	Fugitive			Total Emissions	Total Emissions
	VCU (lb/1000 gal)	(Mmgal)	s (lb/yr)	emissions	Fugitive		(lbs)	(tons)
	0.0167	200	3,338	0	0		3,338	1.67
Total Emissions from loading at 2mg/L =	1.67	tons	OS#1					
Loading at 2 mg/L into inerted vessels:								
Throughput (OS#2):	15	Mmgal]					
			4					
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns		
			Loading	0.1% Fugitive				
	Emission Easter*	Throughput	Rack	Emission after	00.0% to	2 mg/l	Total Emissions	Total Emissions
	(lb/1000 gal)	(Mmgal)	s (lb/yr)	99.9% gues to VCU	99.9 % to VCU	from VCU	(lbs)	(tons)
	3.9000	15	58.500	59	58.442	250	309	0.15
			,					
d Barge previously loaded with a Volatile Liquid								
Total Emissions from loading inerted vessels:	0.15	tons	OS#2					
Loading at marine with VCUM1:			_					
Throughput (OS#3):	12	Mmgal						
			_					
Control Device Emissions Rate:	10	mg/L	equal to:	0.0835	lbs/1000 gallo	ns		
Fugitive Emissions Rate:	0	mg/L	equal to:	0.0000	lbs/1000 gallo	ns		
			Loading					
	Emission Eactor for	Throughput	Emission	Fugitive			Total Emissions	Total Emissions
	VCU (lb/1000 gal)	(Mmgal)	s (lb/yr)	emissions	Fugitive		(lbs)	(tons)
	0.0835	12	1,001	0	0		1,001	0.50
			,	-	-	1	,	

Total Emissions from loading at 10 mg/L =

0.50 tons

OS#3

Global Albany Terminal Example Calculation for Proposed Throughput Cap

Loading at truck and rail with no vac assist: 15 Mmgal Throughput (OS#4 & OS#5): 2 mg/L equal to: 0.0167 lbs/1000 gallons Control Device Emissions Rate: 8 mg/L 0.0668 lbs/1000 gallons equal to: Fugitive Emissions Rate: Loading Rack Emission Factor for Throughput Emission Fugitive **Total Emissions** Total Emissions VCU (lb/1000 gal) (Mmgal) s (lb/yr) emissions Fugitive (lbs) (tons) 1,001 0.0167 15 250 1,001 1,252 0.63 Total Emissions from loading at 10 mg/L = 0.63 tons OS#4 & OS#5 Total emissions from each OS: 2.95 tons Loading at 2mg/L with vac assist for equivalent thruput: Equivalent Throughput: 353.52 Mmgal 2 mg/L equal to: 0.0167 lbs/1000 gallons Control Device Emissions Rate: 0.0000 lbs/1000 gallons 0 mg/L equal to: Fugitive Emissions Rate: Loading Rack Emission Factor for Throughput Emission Fugitive Total Emissions Total Emissions VCU (lb/1000 gal) emissions (Mmgal) s (lb/yr) Fugitive (lbs) (tons) 0.0167 354 5,901 0 0 5,901 2.95 Total Emissions from loading equivalent thruput at 2mg/L = 2.95 tons

Global Albany Terminal Example Calculation #2 for Proposed Throughput Cap

Equinal on t Throws	$-\left(\log_{1} \frac{2mg}{2} + 2mg + \log_{1} \frac{k_{2}}{k_{2}}\right) + k_{2}$	gal marine inerted vessels	kgal mar	ine at VC	UM1 kga	l truck loading wi	th no vac	kgal rail loade	d with no vac
Εquivalent I πruput	$= \left(kgal al \frac{L}{L} al any rack \right) + -$	0.81	+	0.2		0.2	+	0.2	2
Example:	125,000,000 gallons loaded at tr 50,000,000 gallons loaded at r 30,000,000 gallons loaded at r	ruck with vac narine with vac (VCUM2) ail with vac	205,000,000	OS#1	(This is the	sum loaded at the t	ruck, marine	and rail with vac)
	25,000,000 gallons marine load 15,000,000 gallons marine load	ded into inerted vessels ded with VCUM1	OS#2 OS#3						
	8,000,000 gallons truck loade 10,000,000 gallons rail loaded	d with no vac with no vac	18,000,000	OS#4&5	(This is the	e sum loaded at the	truck and rai	l with no vac)	
Equivalent Thruput	= [125,000+50,000+30,000] +(25,00 = 205,000 + 30,864.2 + 75,000 + 40,4 = 400,864	0)/0.81+(15,000)/0.2+(8,000)/ 000 + 50,000	′0.2+(10,000) <u></u>	/0.2	kgallons kgallons kgallons				
Equivalent Thruput	= 400,864,198 gallons 400.86 Mm gallons								

Global Albany Terminal Example Calculation #2 for Proposed Throughput Cap

Loading at 2mg/L with vac assist:

Throughput (OS#1):

205 Mmgal

Control Device Emissions Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns		
Fugitive Emissions Rate:	0	mg/L	equal to:	0.0000	lbs/1000 gallo	ns		
	Emission Factor		Loading Rack				Total	
	for VCU (lb/1000	Throughput	Emissions	Fugitive			Emissions	Total Emissions
	gal)	(Mmgal)	(lb/yr)	emissions	Fugitive		(lbs)	(tons)
	0.0167	205	3,422	0	0		3,422	1.71
Total Emissions from loading at 2mg/L =	1.71	tons	OS#1					
Loading at 2 mg/L into inerted vessels:								
Throughput (OS#2):	25	Mmgal	I					
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallo	ns]	
		[125,000+50	,000+30,000] +(2	25,000)/0.81+(15,000)/0.2+(8	,000)/0.2+(1	10,000)/0.2	
		205 000 +						

OS#2

	205,000 +						
	30,864.2 +		0.1% Fugitive				
	75,000 +	Loading Rack	Emission after			Total	
Emission Factor*	40,000 +	Emissions	99.9% goes to	99.9% to	2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	50,000	(lb/yr)	VCU	VCU	from VCU	(lbs)	(tons)
3.9000	25	97,500	98	97,403	417	515	0.26

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

Total Emissions from loading inerted vessels:

Loading at marine with VCUM1:

Throughput (OS#3):

15 Mmgal

0.26 tons

Control Device Emissions Rate: Fugitive Emissions Rate:

10	mg/L	equal to:	0.0835 lbs/1000 gallons				
0	mg/L	equal to:	0.0000 lbs/1000 gallons				
Emission Factor		Loading Rack				Total	
for VCU (lb/1000	Throughput	Emissions	Fugitive			Emissions	Total Emissions
gal)	(Mmgal)	(lb/yr)	emissions	Fugitive		(lbs)	(tons)
0.0835	15	1,252	0	0		1,252	0.63

Total Emissions from loading at 10 mg/L =

0.63 tons OS#3

Global Albany Terminal Example Calculation #2 for Proposed Throughput Cap

Loading at truck and rail with no vac assist:

Throughput (OS#4 & OS#5):

18 Mmgal

Control Device Emissions Rate: Fugitive Emissions Rate:	2 mg/L 8 mg/L		equal to: equal to:	0.0167 lbs/1000 gallons 0.0668 lbs/1000 gallons				
	Emission Factor for VCU (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	Fugitive emissions	Fugitive		Total Emissions (lbs)	Total Emissions (tons)
	0.0167	18	300	1,202	1,202		1,502	0.75

Total Emissions from loading at 10 mg/L =

0.75 tons OS#4 & OS#5

Total emissions from each OS: 3.35 tons

Loading at 2mg/L with vac assist for equivalent thruput:

Equivalent Throughput:

401 Mmgal

Control Device Emissions Rate:	2 mg/L		equal to:	0.0167 lbs/1000 gallons				
Fugitive Emissions Rate:	0 mg/L		equal to:	0.0000 lbs/1000 gallons				
	Emission Factor		Loading Rack				Total	
	for VCU (lb/1000	Throughput	Emissions	Fugitive			Emissions	Total Emissions
	gal)	(Mmgal)	(lb/yr)	emissions	Fugitive		(lbs)	(tons)
	0.0167	401	6,691	0	0		6,691	3.35

Total Emissions from loading equivalent	
thruput at 2mg/L =	3.35 tons



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Section III -	Facility	Information
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	Facility Compliance Certification (continuation)												
					Rule	Citation							
Title	Туре	Part	Subpa	art	Section	Subdivisio	n	Paragraph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicab	le Federal R	equirement			CA	S No.			Contaminant N	ame			
🗆 State On	ly Requirem	ent	N (apping	0NY998-00-0	and 0NY100-00-0		١	/OC and Total	HAP			
				Ν	/lonitorir	ng Informa	atior	ı					
Continua	ous Emission	Monitoring		Γ] Monitori	ng of Proces	ss or	Control Devi	ce Parameters as	a Surrogat	te		
🗆 Intermit	tent Emissio	n Testing			S Work Pra	actice Involv	ing S	pecific Opera	ations				
□ Ambient	Air Monitor	ing		0	Record K	eeping/Mai	ntena	ance Procedu	ures				
					Des	cription							
The emissions rate of the vapor control devices shall be limited to keep total HAP emissions below 23.75 tons/yr and keep													
individual HAP emissions below 9.5 tons/yr which is less than the applicability thresholds of 40 CFR 63 Subpart R. Facility wide emissions were determined using the most current version of AP 42. The throughput limits were calculated for various													
wide emissions were determined using the most current version of AP-42. The throughput limits were calculated for various operating scenarios.													
This capping condition is applicable for refined product loading at all loading racks. The facility may load up to 1.929 billion													
gallons of any refined product. For the purpose of determining compliance based on source-wide throughput of gasoline, the													
following equivalencies shall be used to determine compliance with alternative operating scenarios. Each kilogallon (Kgal) of													
gasoline is equivalent to: Operating Scenario Loading Equivalent (Kgal) = to													
One (1) Kga	Operating Scenario Loading Equivalent (Kgal) = to One (1) Kgal of Gasoline Refined Product Operating Scenario (OS)												
	1				#1:	Loading at	truck	, rail and/or	marine at 2 mg/l	with vac	assist		
	0.81				#2:	Marine load	ling o	of inerted ves	ssels at 2 mg/L (99.9%)			
	0.2				#3: #4·	Marine load	ling v	with VCUM1 ith no vac as	(10 mg/L) with vesist (2 mg/L and	ac assist	aitives)		
	0.2				#4. #5:	Rail loading	ng wi n with	nn vac assi	ist (2 mg/L and 8	ma/L fuai	itives)		
	0.2				<i>"</i> 0.	r tan loading	,			ing/E lag			
Complianc	e will be det	ermined ba	ised on th	e follov	ving equat	ion:							
Total Thro	ughput of re	fined produ	cts (kgal)	= (kgal	loaded fro	om OS #1) +	⊦ (kg	al loaded fro	m OS #2 / 0.81)	+			
	•	(kgal loade	d from OS	S #3 / 0	.2) + (kgal	loaded from	n ÖS	#4 / 0.2) + (kgal loaded fron	n OS #5 / (0.2)		
(Continue)	4)												
Work Prac		do	Pro	ocess IV	laterial				Reference Te	st Method			
02				0	escription								
03	1	/	Davaaaat	G	asonne		_	_					
Codo			Paramet	er	<u>n</u>				Manufacturer Na	me/Mode	No.		
Coue			De	scriptio	11								
		1 1											
	Upper	Limit		Lower		Code	-		Limit Units	2			
				Lower		Code			Descriptio	Π			
1,9	28,300,000					15			gailons				
	Averaging	Method			Monitor	ing Frequen	icy		Reporting R	equiremer	its		
Code		escription		Cod	e	Descripti	ion	Co	bae	Descriptio	n		
71	Annual To	otal Rolled	Monthly	05		Month	ly	1	15 Anni	ally (Cal	endar)		

Continuation Sheet _____ of _____



	DEC ID													
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Section III - Facility Information

			Facility	<mark>/ Co</mark> mp	oliance C	ertificatio	n (cont	inuatio	n)			
					Rule	Citation						
Title	Туре	Part	Subpa	art	Section	Subdivision	n Par	ragraph	Subparagrap	h Clause	Subclause	
🗆 Applicab	le Federal R	equirement			CA	S No.			Contaminant	Name		
□ State On	ly Requirem	nent	⊠ C	Capping								
				N	Ionitorin	ng Informa	tion					
Continua	ous Emissior	n Monitoring	ç.	0] Monitori	ng of Proces	s or Con	trol Devic	e Parameters	is a Surroga	te	
🗆 Intermit	tent Emissio	on Testing		Ľ	G Work Pra	actice Involvi	ng Speci	ific Opera	tions			
□ Ambient	Air Monito	ring		C	Record K	eeping/Mair	itenance	e Procedu	res			
					Des	cription						
Maximum OS#1: 1,9 OS#2: 1,5 OS#3: 34 OS#5: 34 VCUM1 w This capp The proce	Maximum annual throughput of each operating scenario assuming no loading under any other OS is as follows: OS#1: 1,928,300,000 gallons (assumes all other OS are zero) OS#2: 1,561,923,000 gallons (assumes all other OS are zero) OS#4: 385,660,000 gallons (assumes all other OS are zero) OS#5: 385,660,000 gallons (assumes all other OS are zero) VCUM1 will not be used for loading inerted vessels. This capping condition is applicable for 1-RACKT - RPT, FGT, 2-RACK2R - RPR, FGR & 3-RACKM - RPM, BSM, FGM. The process material selected is gasoline, however this limit applies to all refined product.											
Work Pra	ctice	ata I	Pro	ocess M	aterial			-	Reference	est Metho	ł	
Туре		bde		D	escription							
			Daramat	or								
Code			Paramet	scription	1			-	Manufacturer N	lame/Mode	l No.	
Couc			DC	Seription								
		Limit	·					1	Limit Units			
	Upper			Lower		Code		Description				
	Averaging	Method			Monitor	ing Frequen	cy		Reporting	Requireme	nts	
Code		Description		Cod	e	Descripti	on	Co	ode	Descriptio	on	
								Со	ntinuation Sh	eet o	f	



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Section III -	Facility	Information
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	Facility Compliance Certification (continuation)												
					Rule	Citation							
Title	Туре	Part	Subpa	art	Section	Subdivisio	n f	Paragraph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicab	le Federal R	equirement			CA	S No.			Contaminant Na	me			
🗆 State On	ly Requirem	ent	ШC	apping	0NY998-00-0	and 0NY100-00-0		V	OC and Total I	HAP			
				N	Ionitorir	ng Informa	tion						
Continuc	ous Emission	Monitoring		C] Monitori	ing of Proces	s or C	Control Devic	e Parameters as a	Surrogat	e		
🗆 Intermitt	tent Emissio	n Testing		D	Work Pra	actice Involvi	ing Sp	ecific Opera	tions				
🗆 Ambient	Air Monitor	ring		C	Record K	eeping/Mai	ntenai	nce Procedu	res				
					Des	cription							
keep individual HAP emissions below 9.5 tons/yr which is less than the applicability thresholds of 40 CFR 63 Subpart R. Facility wide emissions were determined using the most current AP-42 formulas. The throughput limits were calculated for various operating scenarios. For the purpose of determining compliance based on source-wide throughput of crude oil, the following equivalencies shall be used to determine compliance with alternative operating scenarios. Each kilogallon (Kgal) of crude oil is equivalent to:													
Operating Scenario Loading Equivalent (Kgal)= to One (1) Kgal of Crude OilCrude Operating Scenario (OS)1#CRD1: Loading at marine dock at 2 mg/L with vac assist0.81#CRD2: Marine loading of inerted vessels at 2 mg/L (99.9%)0.2#CRD3: Marine loading with VCUM1 (10 mg/L) with vac assist													
Compliand	ce will be d	etermined t	ased on	the foll	owing eq	uation:							
Total Thro	ughput of r	efined proc	ucts (kga	al) = (kg	jal loadeo kgal load	I from OS # ed from OS	1) + (6 #3 /	(kgal loaded 0.2)	d from OS #2 / 0	.81) +			
(Continued	1)												
Work Prac	ctice		Pro	ocess M	aterial				Deference Tec	t Mathad			
Туре	Co	ode		D	escription				Reference les	tiviethod			
03	2	71		С	rude Oil								
			Paramet	er					Manufacturer Nan		No		
Code			De	scriptio	า			ľ		ney would	NO.		
	-	Limit						•	Limit Units				
	Upper			Lower		Code			Description	1			
45	0,000,000)				15			gallons				
	Averaging	Method			Monitor	ing Frequen	су		Reporting Re	quiremen	ts		
Code	[Description		Cod	e	Descripti	on	Co	ode [Descriptio	n		
71	Annual To	otal Rolled	Monthly	05		Monthl	у	1	5 Annua	ally (Cale	endar)		
	2				•			 	ntinuation Shee	t of	:		

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	DEC ID												
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Section III - Facility Information

			Facility	y Com	pliance C	ertification	(continuati	on)			
					Rule	Citation					
Title	Туре	Part	Subp	art	Section	Subdivision	Paragraph	Sub	paragraph	Clause	Subclause
Applicab	le Federal R	Requiremen	t _	ı	CA	S No.		Conta	aminant Nar	ne	
🗆 State On	ly Requirem	nent	× (Capping							
				Ν	Monitorin	g Informat	ion				
Continua	ous Emissior	n Monitorir	Ig	[] Monitori	ng of Process	or Control De	vice Para	meters as a	Surrogat	e
🗆 Intermitt	tent Emissic	on Testing		[□ Work Pra	octice Involvin	g Specific Ope	rations			
🛛 Ambient	Air Monito	ring		[☐ Record K	eeping/Maint	enance Proce	dures			
					Des	cription					
Maximum OS#CRD1 OS#CRD3 VCUM1 w This cappi	annual thr 1: 450,000, 2: 364,500, 3: 90,000, ill not be u	oughput o 000 gallor 000 gallor sed to load on is applid	f each cru hs (assum hs (assum d inerted v cable for 3	de ope es all o es all o ressels.	rating scer ther OS ar ther OS ar ther OS ar	nario assumi re zero) re zero) FGM.	ng no loadin	g under	any other (OS is as	follows:
Work Prac	ctice		Pr	ocess N	1aterial			Re	ference Test	t Method	
Type		Jae		Ľ	rescription						
Code			Paramet	ler scriptio	n			Manuf	acturer Nam	ne/Model	No.
Coue			De	scriptio	11						
		Lim	it					Limit	Units		
	Upper			Lower		Code		Linne	Description		
	Averaging	g Method			Monitor	ing Frequency	/	R	eporting Red	quiremen	ts
Code		Description	1	Cod	le	Descriptio	n	Code		Descriptio	n
	1			1			(Continua	ation Sheet	tof	:





Section III - Facility Information

			Facility	/ Com	pliance C	ertification	n (conti	nuatio	n)		
					Rule	Citation					
Title	Туре	Part	Subpa	art	Section	Subdivisior	n Para	Igraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal R	equirement			CA	S No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent	N C	Capping	0NY998-00-0	and 0NY100-00-0		V	OC and Total I	HAP	
			-	Ν	Monitorir	ng Informa	tion				
Continua	ous Emission	Monitoring	g	[] Monitori	ng of Process	s or Cont	rol Devid	e Parameters as a	Surrogat	e
🗆 Intermit	tent Emissio	n Testing		[⊠ Work Pra	actice Involvi	ng Specif	ic Opera	tions		
□ Ambient	Air Monitor	ring		[☐ Record K	eeping/Main	tenance	Procedu	res		
					Des	cription					
Emissions calculated (vac assis permitted Refined p This capp applies to	for this cal using a Tr t) to elimina level in ord roduct throu ing conditio all refined	p were cald uck Rack V ate fugitive ler to maint ughputs sho on is applica product.	culated us /apor Rec emission tain the sa all be incl able for 1-	sing the covery s from ame po uded in -RACK	e most cur Unit (VRU loading. ¹ otential lev n the annu (T, RPT. 1	rent version) emission i Fhe truck ra- rel of truck tr ial complian The process	of AP-4 rate of 2 ck throug raffic. ce repoi materia	2 factor mg/L w ghput is t. I select	rs. Throughput li ith negative pres being capped a ed is gasoline, h	imits wer ssure loa t the pre-	e ding viously his limit
Work Pra	rtice		Dr	ncess M	Naterial						
Туре	Cc	de		C	Description				Reference Tes	t Method	
03	0 [,]	17		(Gasoline						
		•••	Paramet	er							
Code Description Manufacturer Name/Model No.											No.
		Limit	t						Limit Units		
	Upper			Lower		Code			Description		
87	9,300,000					15			gallons		
Averaging Method Monitoring Frequency Reporting Requirements											ts
Code	[Description		Cod	le	Descriptio	on	Co	ode [Descriptio	n
71	Annual To	otal Rolled	Monthly	05	;	Monthly	/	1	5 Annua	ally (Cale	endar)
								Co	ntinuation Shee		:

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Section III - Facility Information

Rule Citation											
Title Type Part Subpart Section Subdivision Paragraph Subparagraph Claus	Subclause										
6 NYCRR 201 7											
Image: Applicable Federal Requirement CAS No. Contaminant Name											
State Only Requirement ONY998-00-0 and ONY100-00-0 VOC and Total HAP											
Monitoring Information											
Continuous Emission Monitoring Information Monitoring Information Monitoring Information Process or Control Device Parameters as a Surrog	ite										
□ Intermittent Emission Testing											
Ambient Air Monitoring Record Keeping/Maintenance Procedures											
Description											
Pacinty-wide refined product throughput (blendstock, distillate, ethanol, gasoline, blodlesel) shall be limited to keep individual and total HAP emissions less than 9.5 tons/yr and 23.75 tons/yr, respectively: that is, less than the applicability thresholds of40 CFR 63, Subpart R. Refined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. This capping condition is applicable for 1-RACKT, RPT; 2-RACTR, RPR; 3-RACKM, RPM, BSM. The process material selected is gasoline, however this limit applies to all refined products.											
Work Practice Process Material											
Type Code Description Reference Test Meth	d										
03 017 Gasoline											
Parameter											
Code Description Manufacturer Name/Mod	el No.										
Limit Limit Units											
Upper Lower Code Description											
1,928,300,000 15 gallons											
Averaging Method Monitoring Frequency Reporting Requirem	nts										
Code Description Code Description Code Description	on										
71 Annual Total Rolled Monthly 05 Monthly 15 Annually (C	lendar)										

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Section III - Facility Information

			Facility	/ Comp	liance C	ertification	(continu	uatio	n)		
					Rule	Citation				-	
Title	Туре	Part	Subpa	art	Section	Subdivision	Parag	raph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	ole Federal R	equirement		Sanaina	CA	S No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent		apping	0NY998-00-0	and 0NY100-00-0			VOC		
				N	Ionitorin	ng Informat	ion				
Continua	ous Emission	Monitoring	5] Monitori	ng of Process	or Contro	l Devic	e Parameters as	a Surrogat	e
🗆 Intermit	tent Emissio	n Testing		×	Work Pra	actice Involvin	g Specific	Opera	tions		
□ Ambient	: Air Monitor	ring			Record K	eeping/Maint	enance Pr	ocedu	res		
					Des	cription					
Emissions equivalent within 90% This capp	s will be calo t format to t 6 of the limi ing conditio	culated usin be approve it. In is applica	ng the lat d by NYS able at the	est vers	sion of AF The NYSI / level, an	P-42. Emissi DEC will be n nd includes a	ons will b notified w Il emissic	e calc ithin fi n unit	ulated on a spre ive (5) days if th s and processes	eadsheet e emissio	or an
Work Pra	ctice	ode	Pro	ocess M					Reference Tes	t Method	
- iype											
			Paramet	er							
Code			De	scriptior	1			Ν	Manufacturer Nar	ne/Mode	No.
		Limit							Limit Units		
	Upper			Lower		Code			Description	1	
	101.33					34			tons		
	Averaging	Method			Monitor	ing Frequency	<u>۷</u>		Reporting Re	quiremer	its
Code	[Description		Code	e	Descriptio	n	Со	de	Descriptic	n
								1	5 Annu	ally (Cal	endar)
					•			Со	ntinuation Shee	t o	£ Contraction of the second seco



349 Northern Blvd, Suite 3 Albany, NY 12204 Phone: 518.453.2203 Fax: 518.453.2204 www.envirospeceng.com

March 18, 2020; Revised July 1, 2020

NYSDEC Regional Permit Administrator c/o Nancy M. Baker Region 4 Headquarters Division of Environmental Permits 1130 North Westcott Rd. Schenectady, NY 12306

Subject: Global Companies LLC – Albany Terminal Title V Facility Permit No. 4-0101-00112/00029 Permit Modification Application

Dear Ms. Baker,

On behalf of Global Companies LLC (Global), Envirospec Engineering, PLLC (Envirospec) is submitting the attached application for a Title V Facility Permit Modification at the Global Companies – Albany Terminal (Terminal) located at 50 Church Street, Albany, New York 12202. The Terminal currently operates under Title V Facility Permit No. 4-0101-00112/00029, which expired 03/02/2016 but was extended under the State Administrative Procedures Act when Global submitted a timely and sufficient renewal application in August 2015.

The enclosed application package includes the following:

- Title V Certification & P.E. Certification
- Title V Permit Application Forms
- List of Exempt Activities
- Method Used to Determine Compliance
- Emissions Unit Matrix
- Annotated Permit
- Project Emission Potential (PEP)
- Potential to Emit Calculations
- Part 212 Modeling Protocol
- Site Plan
- Full Environmental Assessment Form (EAF) and EAF Supplement

The purpose of this permit modification is to redistribute and redefine facility product throughput limits to increase operational flexibility at the Terminal by allowing the loading of refined product across the Facility subject to certain throughput limitations, install additional controls to more efficiently capture and reduce volatile organic compound (VOC) and benzene emissions and to significantly reduce crude oil throughput (collectively referred to as the "Project"). The project will reduce the potential to emit (PTE) VOCs from the Terminal by approximately 45 tons per year (tpy).

The Project includes the following specific components:

- Decrease the allowable crude oil loading throughput limit at the Marine Rack (1-RACK3) from 1.8 billion to 450 million gallons per year while increasing total allowable facility throughput of refined product (gasoline, ethanol, distillate, biodiesel and blendstock (including naphtha, natural gasoline, alkylate, isomerate, reformate and raffinate)) by 450 million gallons for a total reduction in Terminal throughput of approximately 950 million gallons. Reconfigure the facility caps to allow flexibility in the type and volume of products distributed at the individual loading areas to adjust to changing market conditions, while ensuring against major changes in truck or rail traffic by limiting throughput at each rack to currently allowable levels.
- Reduce the emissions limit applicable to the primary marine vapor combustion unit (VCU) (VCUM2) at the Marine Rack from 3 mg/L to 2 mg/L and implement a permit condition for negative pressure loading at the marine rack to control fugitive emissions, when allowable.
- Reduce the emissions limit applicable to the Rail Loading Rack VCU (VCURR) from 10 mg/L to 2 mg/L and implement negative pressure loading (vacuum assist) to control fugitive loading emissions.
- Install exempt boilers and associated piping for storing biodiesel in Tanks 30 and 33.
- Add two loading positions to the truck loading rack to improve efficiency and reduce customer wait time and truck idling time.
- Add seven loading positions at the rail loading rack to allow railcars to be loaded more efficiently and eliminate the need for interim movement of railcars to load certain trains.

Although the Terminal is designed to be operated with the emission controls (VCU/VRU and vac assist), the permit application includes several alternate operating scenarios (AOS) for the loading racks to address possible contingencies as follows:

- Loading at the truck rack with no vac assist as a result of equipment failure.
- Loading at the rail rack with no vac assist as a result of equipment failure
- Loading inerted vessels at the marine dock (VCU 1), which would require no vac assist, but would be assuming 99.9% capture efficiency.
- Loading inerted vessels at the marine dock (VCU 2), which would require no vac assist, but would be assuming 99.9% capture efficiency.

The proposed AOSs and associated permit language are outlined on the attached application forms. The Project is further detailed on the included EAF Supplement Report.

This application is complete based on the requirements in 6 NYCRR 201-6.2(d), as outlined below:

- Identifying information
 - Provided on the Application Forms.
- A description of the facility's processes and products (by Standard Industrial Classification or North American Industry Classification System code)
 - Provided on the Application Forms and Emissions Unit Matrix.
- Emissions-related information
 - Provided on the Application Forms.
- Air pollution control information


- Provided on the Application Forms.
- Other information that may be necessary to implement and enforce applicability requirements
 - Provided on the Application Forms.
- An explanation of any proposed exemptions from otherwise applicable Federal requirements
 - No proposed exemptions are requested at this time.
 - A description of any proposed exempt activities and/or emission units.
 - This information is provided on the enclosed List of Exempt Activities Form.
- Information necessary to define operational flexibility proposed in accordance with section 201-6.4
 - Proposed Alternate Operating Scenarios are included on the Application Forms.
- Acid rain information (if applicable)
 - This facility is not subject to acid rain provisions.
 - Certification by a responsible official.
 - Provided on Application Forms.

The application includes an analysis of the Project under the nonattainment New Source Review (NSR) program (see the Project Summary and NSR Analysis). That analysis shows that the Project Emission Potential (PEP) is well below the 40 ton per year significant modification threshold for volatile organic compounds established under 6 NYCRR Part 231.

The application also includes a Part 212 Modeling Protocol outlining Global's proposed approach to analyzing emissions under 6 NYCRR Part 212.

Finally, the application package includes a Full EAF, together with a Supplement Report, which contains detailed information about the Project and its potential impacts. The Supplement Report is intended to provide DEC with the information necessary to fully understand the Project from a State Environmental Quality Review Act perspective.

As you know, during the past year Global has devoted substantial resources and time reaching out to the community and will continue to do so in accordance with the Public Participation Plan.

Should you have any questions please feel free to contact me at (518) 453-2203.

Sincerely,

Gíanna Aíezza

Gianna Aiezza, PE Principal Engineer Envirospec Engineering, PLLC

Cc: Tom Keefe - Global



New York State Department of E Air Permit Application	Environmental Conservation	on 🦯	STATE OF OPPORTUNITY	Department of Environmental Conservation
DEC ID 4 - 0 1 0 1 - 0 0 1 1 2 4 -	Application ID 0 1 0 1 1 2 0 Section I - Certification	0 0 2 9	Ap State	olication Type e Facility × Title V
	Certification			
I certify under penalty of law that this document and all at assure that qualified personnel properly gather and evalua gathering the information required to complete this applic penalties for submitting false information, including the po	tachments were prepared under my direction ate the information submitted. Based on my in cation, I believe the information is true, accura ossibility of fines and imprisonment for knowir	or supervision in ac equiry of the person Ite, and complete. I ng violations.	ccordance with or persons dire am aware that	a system designed to ectly responsible for there are significant
Responsible Official Tom Keefe		Title	VP EHS	Operations
Signature	<u>>></u>	Date	3-16	-2020
	Professional Engineer Certificatio	on 		ment and all its
I certify under penalty of law that I have personally examinate attachments as they pertain to the practice of engineering of fines and imprisonment for knowing violations.	ed, and am familiar with, the statements and . I am aware that there are significant penaltic	es for submitting fa	lse information	, including the possibility
Professional Engineer Gianna Aiezza		NYS LI	cense No.	018422
Signature Sant		Date	3/18/	202D
Sectio	mil - Identification Inform	nation		
	Type of Permit Action Requested			
New Renewal × Signification for the construction of a n	nt Modification Administrative A	Amendment	Minor Mo	dification
Application for the construction of a n	Facility Information	s the construct		
Name Global Companies LLC - Albany	Terminal	<u>Ander Handerson and Charles and Charles and Charles and Charles and Charles and Charles and Charles and Charles</u>		
Location Address 50 Church Street - Po	rt of Abany			
× City / Town / Village Albany			Zip	12202
Owner/	Firm Information		Busi	ness Taxpayer ID
Name Global Companies LLC			04	3 4 4 3 0 2 9
Street Address 800 South Street				
_{City} Waltham	State/Province MA	Country Unite	ed States	zip 02454
Owner Classification: Federal State	e Municipal 🛛 🛪 Corpora	ation/Partnershi	ip Ir	ndividual
	Owner/Firm Contact Information	n en	and the second sec	
_{Name} Tom Keefe		1	Phone (78	1) 398-4132
E-mail Address TKeefe@Globalp.com		1	_{=ax} (781)	398-9212
Affiliation Global Companies LLC		_{Title} VF	P EHS Op	erations
Street Address 800 South Street				
_{City} Waltham	State/Province MA	Country Unite	ed States	zip 02454
	Facility Contact Information			
Name Charles Furman		F	Phone (51	8) 445-1302
E-mail Address CFurman@Globalp.com		F	ax (518)	436-6788
Affiliation Global Companies LLC		_{Title} Te	rminal Ma	nager
Street Address 50 Church Street		- ja -		
_{City} Albany	State/Province NY	Country Unite	ed States	zip 12202





				Section	- 11	Facility III	ormation			
				F	acil	ity Classificati	ion			
	🗆 Hospita		Residential	Educatio	nal,	/Institutional	Commerci	al 🛛 Industria		ltility
				Affected Sta	ites	(Title V Appli	cations Only)			
	🗆 Verm	iont 🛛	Massachus	setts 🛛 Rhod	e Is	land 🛛 Penns	sylvania Triba	l Land:		
	🗆 Ne	ew Hamps	shire 🗆 🕻	Connecticut I	J N	ew Jersey 🛛	Ohio Tribal L	and:		
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L a contifición				mpliance Stat	em	ents (Title V A	Applications C	inly)		NI -
l certify	that as of the	e date of	this applica	ation the facilit	y is i	in compliance w	with all applicab	le requirements. L	⊥Yes ⊔	No
If one or	more emiss	sion units	at the facil	ity are not in c	omp	liance with all a	applicable requi	rements at the tin	ne of sign	ing this
applicati	ion (the 'NO	' box mus	st be checke	ed), the nonco	mpl	ying units must	be identified in	the "Compliance	Plan" blo	ock on page
8 of this	form along	with the o	compliance	plan informati	on r	equired. For all	emission units	at the facility that	are oper	rating <u>in</u>
complia	<u>nce</u> with all a	applicable	e requireme	ents, complete	the	following:				
□ This f	acility will co	ontinue to	o be operat	ted and mainta	ineo	d in such a man	ner as to assure	e compliance for t	he durati	on of the
permit, e	except those	e emissio	n units refe	erenced in the o	com	pliance plan po	rtion of this ap	plication.		
□ For al	l emission u	nits subje	ect to any a	pplicable requi	rem	ents that will b	ecome effective	e during the term	of the pe	rmit, this
facility w	vill meet suc	h require	ments on a	timely basis.				5		-
□ Comn	liance certif	ication re	ports will h	, e submitted at	lea	st once ner vea	r Fach report v	vill certify complia	ince stati	is with respect
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to caen a		quireine								
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	I	1		Facility	Sta	ite Only Requi	irements	[Continu	uation Sheet(s)
Title	Туре	Part	Subpa	art Section	on	Subdivision	Paragraph	Subparagraph	Clause	Subclause
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		Fac	ility Applicat	ole Federa	l Requireme	nts (continu	ation)		
Title	Туре	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
40	CFR	60	Kb	116b					
40	CFR	60	А	12					
40	CFR	60	А	13					
40	CFR	60	А	14					
40	CFR	60	А	15					
40	CFR	60	А	4					
40	CFR	60	XX	502	b				
40	CFR	60	XX	502	е				
40	CFR	60	XX	502	f				
40	CFR	60	XX	502	g				
40	CFR	60	XX	502	i				
40	CFR	60	А	7	а				
40	CFR	60	А	7	b				
40	CFR	60	А	7	С				
40	CFR	60	А	7	d				
40	CFR	60	А	7	e				
40	CFR	60	А	7	f				
40	CFR	60	А	7	g				
40	CFR	60	А	8	а				
40	CFR	60	А	8	b				
40	CFR	60	А	8	С				
40	CFR	60	А	8	d				
40	CFR	60	А	8	е				
40	CFR	60	А	8	f				
40	CFR	60	А	9					
40	CFR	63	BBBBBB	11081	а				
40	CFR	63	BBBBBB	11083	b				
40	CFR	63	BBBBBB	11087					
40	CFR	63	BBBBBB	11088					
40	CFR	63	BBBBBB	11089					
40	CFR	63	BBBBBB	11092	а				





		Fac	ility Applicat	ole Federa	l Requireme	nts (continu	ation)		
Title	Туре	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
40	CFR	63	BBBBBB	11092	а	2			
40	CFR	63	BBBBBB	11092	а	3			
40	CFR	63	BBBBBB	11094	b				
40	CFR	63	BBBBBB	11094	С				
40	CFR	63	BBBBBB	11092	b	1	i	Α	
40	CFR	63	BBBBBB	11094	d				
40	CFR	63	BBBBBB	11094	е				
40	CFR	63	BBBBBB	11094	f				
40	CFR	63	BBBBBB	11095	а				
40	CFR	63	BBBBBB	11095	b				
40	CFR	63	BBBBBB	11098					
40	CFR	63	BBBBBB	11092	b	1	iii	Α	
40	CFR	68							
40	CFR	82	F						
40	CFR	64							
6	NYCRR	200		6					
6	NYCRR	200		7					
6	NYCRR	201	1	7					
6	NYCRR	201	1	8					
6	NYCRR	201	3	2	а				
6	NYCRR	201	3	3	а				
6	NYCRR	202	1	1					
6	NYCRR	202	1	2					
6	NYCRR	202	1	3	а				
6	NYCRR	202	2	1					
6	NYCRR	202	2	5					
6	NYCRR	211		1					
6	NYCRR	212	3	1	с	4	i		
6	NYCRR	215		2					
6	NYCRR	225	3	3	а				
6	NYCRR	229		1	d	2	i		





Facility Applicable Federal Requirements (continuation)												
Title	Туре	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause			
6	NYCRR	229		1	d	2	iv					
6	NYCRR	229		1	d	2	v					
6	NYCRR	229		3	а							
6	NYCRR	229		3	d							
6	NYCRR	229		3	е	1						
6	NYCRR	231	11	2	С							
6	NYCRR	201	6									
6	NYCRR	201	7									
6	NYCRR	212		2								
6	NYCRR	225	1	2								
6	NYCRR	225	1	6	b							
6	NYCRR	225	1	6	С							



DEC											
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Title Type	Part	Subpart	Sect	ion	Subdivision	Para	agraph	Subparagra	iph (Clause	Subclause
Applicable Feder	al Requirem	ent _		С	AS Number			Contamin	ant Na	ame	
□ State Only Requi	rement		Capping								
			Μ	onit	oring Informa	tion					
U Work Practice	e Involving Sp	pecific Opera	ations [] Am	bient Air Monit	oring	□ Re	cord Keeping/	/Maint	enance	Procedures
			comp		c Activity Des						
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Type Code	Code		Desc	riptic	on			Kelefend	Le Test	metho	,
Code	Mo	onitored Par	ameter	<u> </u>			M	anufacturer's	Name	/Model	Number
Code			Description	1							
	imit						Limit Ur	its			
Upper	Low	ver	Code					Description			
Averag	ging Method			Mo	nitoring Freque	ncy		Repo	orting	Require	ments
Code	Descriptio	on	Code		Descrip	tion		Code		Descri	ption
	1		Faci	lity	Emissions Sum	nmary	/	Detential to 1		Continu	ation Sheet(s)
CAS Number			Contamina	ant N	ame			(tons/yr)	Emit	Actu	ounds/yr)
0NY075 - 00 - 5			PM-	10							
0NY750 - 02 - 5			PM-	2.5							
007446 - 09 - 5			Sulfur D	ioxic	le						
0NY210 - 00 - 0			Oxides of	Nitro	gen						
000630 - 08 - 0			Carbon M	lono>	kide						
007439 - 92 - 1			Lead (ele	men	tal)						
0NY998 - 00 - 0		Total V	olatile Org	anic	Compounds						
0NY100 - 00 - 0	1	Total	Hazardous	s Air I	Pollutants						
0NY750 - 00 - 0		Car	bon Dioxid	e Equ	uivalents						
										1	
	1										





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			Facility	/ Com	pliance C	ertification	(contin	uatio	n)				
					Rule	Citation							
Title	Туре	Part	Subpa	art	Section	Subdivision	Parag	graph	Subpar	ragraph	Clause	Subclause	
6	NYCRR	201	7										
🗵 Applicab	le Federal R	equirement			CA	S No.			Contam	inant Nar	ne		
🗆 State On	ly Requirem	ent	N (Capping	0NY998-00-0	and 0NY100-00-0			V	/0C			
					Monitorir	ng Informat	ion						
Continua	ous Emission	Monitoring	5		🗆 Monitori	ng of Process	or Contro	ol Devic	e Parame	eters as a	Surrogat	e	
🗆 Intermit	tent Emissio	n Testing			🗵 Work Pra	actice Involvin	g Specifio	: Opera	tions				
□ Ambient	Air Monitor	ing			□ Record K	eeping/Maint	enance F	rocedu	res				
					Des	cription							
Emissions equivalent within 90% This capp	The facility total VOC emissions will not exceed 101.33 tons on a rolling annual basis. Emissions will be calculated using the latest version of AP-42. Emissions will be calculated on a spreadsheet or an equivalent format to be approved by NYSDEC. The NYSDEC will be notified within five (5) days if the emissions are within 90% of the limit. This capping condition is applicable at the facility level, and includes all emission units and processes.												
Type		de	Pr	ocess N	Description				Refer	ence Test	Method		
.,,,,,					beschption								
			Paramet	er									
Code			De	scriptio	on			Γ	Manufact	urer Nam	e/Model	No.	
		Limit	:						Limit Un	nits			
	Upper			Lowe	r	Code			De	escription			
	101.33					34				tons			
	Averaging	Method			Monitor	ing Frequency	y		Repo	orting Red	quiremen	ts	
Code	C	Description		Co	de	Descriptio	n	Со	de	C	escriptio	n	
								1	5	Annua	ally (Cale	endar)	
								6	ntinuati	on Shaat		-	

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			Facility	<mark>/ Co</mark> mp	oliance C	ertification	(continu	atior	า)					
	Rule Citation Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause													
Title	Туре	Part	Subpa	art	Section	Subdivision	Paragra	aph	Subparagraph	Clause	Subclause			
6	NYCRR	201	7											
🗵 Applicab	le Federal R	equiremen	nt 🛛		CA	AS No.			Contaminant Na	me				
State On	ly Requirem	ent	× (Capping	0NY998-00-0	and 0NY100-00-0		V	OC and Total I	HAP				
				N	Ionitorir	ng Informat	tion							
Continua	ous Emission	Monitorir	ng	C] Monitori	ing of Process	or Control	Devic	e Parameters as a	Surrogat	e			
🗆 Intermit	tent Emissio	n Testing		×	থ Work Pra	actice Involvin	ng Specific C	perat	tions					
□ Ambient	Air Monitor	ing			Record K	eeping/Maint	tenance Pro	cedu	res					
					Des	scription								
Facility-w individual applicabil VOC em This capp The proce	Facility-wide refined product throughput (blendstock, distillate, ethanol, gasoline, biodiesel) shall be limited to keep individual and total HAP emissions less than 9.5 tons/yr and 23.75 tons/yr, respectively: that is, less than the applicability thresholds of40 CFR 63, Subpart R. Refined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. This capping condition is applicable for 1-RACKT, RPT; 2-RACTR, RPR; 3-RACKM, RPM, BSM. The process material selected is gasoline, however this limit applies to all refined products.													
Work Pra	rtice		Pr	ocess M	aterial									
Туре	Co	de		D	escription				Reference Tes	t Method				
03	0	17		Gasol	ine									
			Paramet	er					Appufactures No.	no/Model	No			
Code			De	scriptior	n			N	nanulacturer Nan	ie/wodel	NO.			
		Lim	it						Limit Units					
	Upper			Lower		Code			Description					
1,9	928,300,00	00				15			gallons					
	Averaging	Method			Monitor	ring Frequenc	У		Reporting Re	quiremen	its			
Code		Description		Code	e	Descriptio	n	Со	de [Descriptio	n			
71	71 Annual Total Rolled Monthly 05 Monthly 15 Annually (Calendar)													

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			Facility	Compli	iance C	ertification	continuatio	n)				
					Rule	Citation		-				
Title	Туре	Part	Subpa	art S	ection	Subdivision	Paragraph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7									
🗵 Applicab	le Federal Re	equirement		anning	CA	S No.		Contaminant Na	me			
🗆 State On	ly Requireme	ent		apping	0NY998-00-0	and 0NY100-00-0	١	/OC and Total I	HAP			
				Mo	onitorin	g Informatio	on					
🗆 Continuo	ous Emission	Monitorin	g		Monitori	ng of Process c	or Control Devic	ce Parameters as a	Surrogat	e		
🗆 Intermit	tent Emissior	n Testing		×	Work Pra	octice Involving	Specific Opera	itions				
□ Ambient	Air Monitori	ing			Record K	eeping/Mainte	nance Procedu	ires				
					Des	cription						
emissions throughpu Emissions using a M fugitive en Blendstoc This capp	 Blendstock throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/yr: less than the applicability thresholds of 40 CFR 63, Subpart R. Blendstock throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42. Throughput limits were calculated using a Marine VCU emission rate of 2 mg/L (VCUM2), and with negative pressure loading (vac assist) to eliminate fugitive emissions from loading. Blendstock throughputs shall be included in the annual compliance report. This capping condition is applicable for 3-RACKM, BSM. 											
Work Pra	ctice		Pro	ocess Mat	terial							
Туре	Co	de		Des	scription			Reference Tes	t Method			
03	01	1		Other L	iquid Fu	uels						
			Paramet	er				Apputation No.		No		
Code			De	scription				vianufacturer Nan	ie/Wodel	NO.		
		Limi	t					Limit Units				
	Upper			Lower				Description				
						Code		Description				
38	80,000,000				_	15		gallons	I			
38	80,000,000 Averaging	Method			Monitor	15 ing Frequency		gallons Reporting Rep	quiremen	ts		
Code	80,000,000 Averaging I D	Method		Code	Monitor	Code 15 ing Frequency Description	Cc	gallons Reporting Reporting quiremen Descriptio	ts n			

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	Facility Compliance Certification (continuation) Rule Citation												
	Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause												
Title	Туре	Part	Subpa	art	Section	Subdivision	ו Pa	aragraph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicat	le Federal R	equiremen	t 🖂	· · · · · ·	CA	AS No.			Contaminant Na	ne			
State Or	ly Requirem	ent		apping	0NY998-00-0) and 0NY100-00-0		V	OC and Total H	HAP			
				r	Monitorir	ng Informa	tion						
Continu	ous Emission	Monitorin	g]	🗆 Monitori	ing of Proces	s or Co	ntrol Devic	e Parameters as a	Surrogat	e		
🗆 Intermit	tent Emissio	n Testing		I	🗵 Work Pra	actice Involvi	ng Speo	cific Opera	tions				
C Ambient	Air Monitor	ing			🗆 Record K	Ceeping/Mair	itenanc	ce Procedu	res				
					Des	scription							
Emissions calculated (vac assis permitted Refined p This capp applies to	 The emissions below 9.5 tonsyl. less than the applicability thresholds of 40 Cr K to, Subpart K. The relined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42 factors. Throughput limits were calculated using a Truck Rack Vapor Recovery Unit (VRU) emission rate of 2 mg/L with negative pressure loading vac assist) to eliminate fugitive emissions from loading. The truck rack throughput is being capped at the previously permitted level in order to maintain the same potential level of truck traffic. Refined product throughputs shall be included in the annual compliance report. This capping condition is applicable for 1-RACKT, RPT. The process material selected is gasoline, however this limit applies to all refined product. 												
			Da	N	4-+								
		ode	Pr	ocess N	Description				Reference Tes	t Method			
03	0,	17			Gasoline								
00		<u> </u>	Paramet	er	Casoline								
Code			De	scriptio	n		_	N	Aanufacturer Nam	ne/Model	No.		
		Lim	it						Limit Units				
	Upper			Lower	r	Code			Description				
87	9,300,000					15			gallons				
	Averaging	Method			Monito	ring Frequen	су		Reporting Rec	quiremen	ts		
Code	[Description		Сос	le	Descripti	on	Со	de C	Descriptio	n		
71	Annual To	otal Rollec	Monthly	05	5	Monthl	y	1	5 Annua	ally (Cale	endar)		
-	-			-					ntinuation Chaol		-		

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Section III - Facility Information

			Facility	Compl i	iance C	ertification	(continuat	ion)					
	Rule CitationTitleTypePartSubpartSectionSubdivisionParagraphSubparagraphClauseSubclause												
Title	Туре	Part	Subpa	art S	ection	Subdivision	Paragrap	u Suk	oparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicab	le Federal Re	equiremer	nt 🛛	`a u u iu a	CA	S No.		Cont	taminant Nar	ne			
🗆 State On	ly Requirem	ent		apping.	0NY998-00-0	and 0NY100-00-0		VOC	and Total H	IAP			
				Mo	onitorin	ng Informat	ion						
Continuc	ous Emission	Monitorir	וg		Monitori	ng of Process	or Control De	vice Par	rameters as a	Surrogat	e		
🗆 Intermit	tent Emissio	n Testing		×	Work Pra	actice Involvin	g Specific Op	rations					
□ Ambient	Air Monitor	ing			Record K	eeping/Maint	enance Proce	dures					
					Des	cription							
emissions also be lin Emissions a Marine \ emissions Crude Oil This cappi	Crude Oil throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/yr; less than the applicability thresholds of 40 CFR 63, Subpart R. Crude oil throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42. Throughput limits were calculated a Marine VCU emission rate of 2 mg/L (VCUM2) with negative pressure loading (vac assist) to eliminate fugitive emissions from loading. Crude Oil throughputs shall be included in the annual report. This capping condition is applicable for 3-RACKM, CDM.												
Work Prac	ctice		Pro	ocess Mat	erial				-femanes Test				
Туре	Со	de		Des	cription			Re	elerence l'est	liviethod			
03	27	71		Cru	ude Oil								
			Paramet	er				Manu	facturer Nam	ne/Model	No		
Code			De	scription				Iviana		ic, would	110.		
		Lim	it					Limi	t Units				
	Upper			Lower		Code			Description				
45	50,000,000					15			gallons				
	Averaging	Method			Monitor	ing Frequency	/	F	Reporting Rec	quiremen	ts		
Code	C	Description	1	Code		Descriptio	n	Code	C	Descriptio	n		
71	71 Annual Total Rolled Monthly 05 Monthly 15 Annually (Calendar)												

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	Facility Compliance Certification (continuation) Rule Citation												
	Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause												
Title	Туре	Part	Subpa	art	Section	Subdivisio	n F	Paragraph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicab	le Federal R	equiremen	t 🗖		CA	S No.	·		Contaminant Na	me			
🗆 State On	ly Requirem	ent	× (apping	0NY998-00-0	and 0NY100-00-0		V	OC and Total I	HAP			
				N	/lonitorir	ng Informa	tion						
Continua	ous Emission	Monitorin	g	C] Monitori	ng of Proces	s or C	Control Devic	e Parameters as a	Surrogat	e		
🗆 Intermit	tent Emissio	n Testing		D	S Work Pra	actice Involvi	ng Sp	ecific Opera	tions				
C Ambient	Air Monitor	ring		C	Record K	eeping/Mair	ntenar	nce Procedu	res				
					Des	cription							
HAP emis throughpu Emissions using a Ra with nega Refined pr This cappi applies to	Refined product throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/yr: less than the applicability thresholds of 40 CFR 63, Subpart R. Refined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42. Throughput limits were calculated using a Rail Vapor Combustion Unit (VCU) emission rate of 2 mg/L with negative pressure loading (vac assist) to eliminate fugitive emissions from loading. Refined product throughputs shall be included in the annual report. This capping condition is applicable for 2-RACKR, RPR. The process material selected is gasoline, however this limit applies to all refined products.												
Work Pra	ctice		Pr	ocess M	laterial								
Туре	Co	ode		D	escription				Reference Tes	t Method			
03	0	17			Gasoline								
			Paramet	er					As a factor at		No		
Code			De	scriptio	n				vianulacturer Nan	ie/wodel	NO.		
		Lim	it						Limit Units				
	Upper			Lower		Code			Description	1			
30	0,000,000)				15			gallons				
	Averaging	Method			Monitor	ing Frequen	су		Reporting Re	quiremen	ts		
Code	[Description		Cod	e	Descripti	on	Со	de [Descriptio	n		
71	Annual To	otal Rolled	I Monthly	05		Monthl	y	1	5 Annua	ally (Cale	endar)		
					-				ntinuation Chao				





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			Facility	/ Comj	pliance C	ertification	n (contin	uatio	n)		
		-			Rule	Citation					
Title	Туре	Part	Subpa	art	Section	Subdivision	n Parag	graph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal R	equirement		`	CA	AS No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent		apping	0NY998-00-0) and 0NY100-00-0		V	OC and Total I	HAP	
				Ν	Aonitorir	ng Informa	tion				
Continua	ous Emissior	n Monitoring	5	[☐ Monitori	ing of Process	or Contro	ol Devic	e Parameters as a	a Surrogat	e
🗆 Intermit	tent Emissio	n Testing			Nork Pra	actice Involvii	ng Specifio	: Opera	tions		
□ Ambient	: Air Monitor	ring			Record K	(eeping/Main	tenance P	rocedu	res		
					Des	scription					
Emissions calculated (vac assis permitted Refined p	t shall also for this ca l using a Tr t) to elimina level in orc	p were cald uck Rack \ ate fugitive ler to main	all be incl	sing the covery s from ame po	e most cur Unit (VRL loading. otential lev	Trent version J) emission I The truck rad vel of truck	of AP-42 rate of 2 r ck throug raffic. ce report	factor ng/L w hput is	ites folds of 6 N s. Throughput li ith negative pres being capped a	imits wer ssure loa t the pre	ding viously
applies to	all refined	product.									
Work Pra	ctice		Pr	ocess N	laterial				Deference Tec	t Mothod	
Туре	Co	ode		D	escription				Reference les	t Methou	
03	0	17		(Gasoline						
			Paramet	er				Ν	Manufacturer Nan	ne/Model	No.
Code			De	scriptio	n					10,110000	
		Limi	t						Limit Units		
	Upper			Lower		Code			Description		
87	9,300,000				N.4	15			gallons		h
Code	Averaging			Cod			y n	C	Reporting Re	Quiremen	n.
71		tal Pollod	Monthly	05		Monthly	/	1	5 Δοριμ		andar)
71			wonuny	05	,	MONUN	/				silual)

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Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Rule Citation Continuous Rule Citation Continuous Rule Citation Rule Citation Continuous Rule Citation Rule Citation Continuous Rule Citation <t< th=""><th></th><th></th><th></th><th>Facility</th><th>y Com</th><th>oliance C</th><th>ertification</th><th>(contin</th><th>uatio</th><th>n)</th><th></th><th></th><th></th></t<>				Facility	y Com	oliance C	ertification	(contin	uatio	n)			
Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause 6 NYCRR 201 7 -						Rule	Citation						
6 NYCRR 201 7 CAS No. Contaminant Name B Applicable Federal Requirement B Capping CAS No. Contaminant Name Continuous Emission Monitoring Monitoring of Process or Control Device Parameters as a Surrogate Monitoring Specific Operations Continuous Emission Monitoring Monitoring of Process or Control Device Parameters as a Surrogate Monitoring Specific Operations Ambient Air Monitoring Record Keeping/Maintenance Procedures Description The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/yr which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 40 CFR 63, Subpart R. The emission rate of 2 mg/L. YCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Work Practice Process Material Reference Test Method Type Code Description VCUM2 will be operated at a maximum emission rate of 2 mg/L. Method 25A or 25B, Method 21, Method 2A Parameter Manufacturer Name/Model No. Method 25A or 25B, Method 21, Method 2A Code Description Sa 18 milligrams pe	Title	Туре	Part	Subp	art	Section	Subdivision	Para	graph	Subp	aragraph	Clause	Subclause
Image: State Only Requirement Image: CAS No. Contaminant Name Image: State Only Requirement Image: State Only Requirement VOC and Total HAP Image: State Only Requirement Image: State Only Requirement VOC and Total HAP Image: State Only Requirement Image: State Only Requirement VOC and Total HAP Image: State Only Requirement Image: State Only Requirements VOC and Total HAP Image: State Only Requirement Image: State Only Requirements VOC and Total HAP Image: State Only Requirement Image: State Only Requirements VOC and Total HAP Image: State Only Requirement Image: State Only Requirements VOC and Total HAP Image: State Only Requirements Image: State Only Requirements VOC and Total HAP Image: State Only Requirements Image: State Only Requirements State Only Requirements Image: State Only Requirements Image: State Only Requirements State Only Requirements State Only Requirements Image: State Only Requirements Image: State Only Requirements Image: State Only Requirements State Only Requirements Image: State Only Requirements Image: State Only Requirements Image: State Only Requirements Image: State Only Requirements Image: St	6	NYCRR	201	7									
B State Only Requirement El Capping Overse de a and servitado de la de Minitoria de la Monitoring of Process or Control Device Parameters as a Surrogate Intermittent Emission Testing El Monitoring of Process or Control Device Parameters as a Surrogate Intermittent Emission Testing El Monitoring of Process or Control Device Parameters as a Surrogate Zambient Air Monitoring B Work Practice Involving Specific Operations The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 95 tonsity winhto is less than the applicability thresholds of 40 CFR 63. Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Work Practice Process Material Reference Test Method Type Code Description Work Practice Process Material Reference Test Method Type Code Description Manufacturer Name/Model No. Code Description Code Description Manufacturer Name/Model No. Code Description 11 Limit Limit Limit Units Upper Lower <	🗵 Applicab	le Federal R	equireme	nt		CA	S No.			Conta	minant Nar	ne	
Monitoring Information Continuous Emission Monitoring Monitoring of Process or Control Device Parameters as a Surrogate Ambient Air Monitoring Work Practice Involving Specific Operations Ambient Air Monitoring Record Keeping/Maintenance Procedures Description Description The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 23.75 tons/yr and keep individual HAP emissions below 19.5 tons/yr which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. Code This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Reference Test Method Type Code Description Reference Test Method Manufacturer Name/Model No. Code Description Limit Limit Units Upper Lower Code Upper Lower Code Upper Lower Code Limit Umit Units Manufacturer Name/Model No. Code Description Code Description	🗆 State On	ly Requirem	ent	× (Capping	0NY998-00-0	and 0NY100-00-0		V	/OC ai	nd Total H	IAP	
Continuous Emission Monitoring Monitoring of Process or Control Device Parameters as a Surrogate Intermittent Emission Testing B Work Practice Involving Specific Operations Mahient Air Monitoring Record Keeping/Maintenance Procedures Description Description The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 0.5 tons/yr which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. VCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Reference Test Method Method 25A or 25B, Method 21, Method 2A Parameter Code Description Manufacturer Name/Model No. Code Description Manufacturer Name/Model No. Code Description Manufacturer Name/Model No. Code Operation Sill milligrams per liter Veraging Method Monitoring Frequency Reporting Requirements					Ν	/lonitorir	ng Informat	ion					
□ Intermittent Emission Testing □ Work Practice Involving Specific Operations □ Ambient Air Monitoring □ Becord Keeping/Maintenance Procedures □ The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 25 tons/yr which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 MYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Work Practice Process Material Type Code Parameter Method 25A or 25B, Method 21, Method 2A Code Description Manufacturer Name/Model No. Code Description Upper Lower Code Upper Lower Code Upper Lower Code Description All opperation 318 milligrams per liter Averaging Method Monitoring Frequency Reporting Requirements	Continua	ous Emission	Monitori	ing	[] Monitori	ing of Process	or Contr	ol Devic	e Para	meters as a	Surrogat	e
□ Ambient Air Monitoring □ Record Keeping/Maintenance Procedures □ Ambient Air Monitoring □ Description The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 9.5 tons/yr which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Work Practice Process Material Type Code Ocde Description Method 25A or 25B, Method 21, Method 2A Code Description Manufacturer Name/Model No. Code Description Upper Lower Code Upper Lower Code Verraging Method Monitoring Frequency Reporting Requirements	🗖 Intermitt	tent Emissio	n Testing			🛛 Work Pra	actice Involvir	ig Specifio	: Opera	tions			
Werk Practice Process Material Work Practice Process Material Method 25A or 25B, Method 21, Method 2A Type Code Description Manufacturer Name/Model No. Manufacturer Name/Model No. State SB, Method 21, Method 20, Manufacturer Name/Model No. Work Practice Process Material Method 25A or 25B, Method 21, Method 2A Type Code Description Manufacturer Name/Model No. Manufacturer Name/Model No. SB, Method 21, Method 2A SB, Method 21, Method 2A Code Description Manufacturer Name/Model No. Manufacturer Name/Model No. SB, Manufacturer Name/Model No. SB, Method 21, Method 2A Code Description Manufacturer Name/Model No. SB, Manufacturer Name/Model No. Code Description SB, Method 21, Method 2A SB, Method 21, Method 2A Code Description Manufacturer Name/Model No. SB, Method 2B, Metho	🗖 Ambient	Air Monitor	ing		[Record K	eeping/Main	tenance F	rocedu	ires			
The emissions rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/yr which is less than the applicability thresholds of 40 CFR 63, SUbpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. VCUM2 will be operated at a maximum emission rate of 2 mg/L. This capping condition is applicable for 3-RACKM, RPM, BSM, and CDM. Work Practice Process Material Reference Test Method Type Code Description Method 25A or 25B, Method 21, Method 2A Code Description Manufacturer Name/Model No. Manufacturer Name/Model No. Code Description Manufacturer Name/Model No. Manufacturer Name/Model No. Code Description S13 milligrams per liter Averaging Method Monitoring Frequency Reporting Requirements						Des	cription						
Work Practice Process Material Reference Test Method Type Code Description Method 25A or 25B, Method 21, Method 2A Code Parameter Manufacturer Name/Model No. Code Description Euler Code Description Manufacturer Name/Model No. Code Description Euler Code Sater Sater Querer Lower Code Description Querer Lower Code Description Code Description Sater Sater Code Description Code Description	thresholds VCUM2 w	s of 6 NYCF ill be opera	RR 231-6 ted at a r	i. maximum e icable for 3	emissio -RACK	n rate of 2	? mg/L. BSM, and C	DM.					
Type Code Description Reference Test Method Type Code Description Method 25A or 25B, Method 21, Method 2A Parameter Manufacturer Name/Model No. Manufacturer Name/Model No. Code Description Limit Units Limit Limit Units Description Upper Lower Code Description 2 318 milligrams per liter Averaging Method Monitoring Frequency Reporting Requirements Code Description Code Description	Work Prac	rtice		Pr	ocess M	laterial		_					
Method 25A or 25B, Method 21, Method 2AParameterManufacturer Name/Model No.CodeDescriptionLimitLimit UnitsCodeDescriptionQupperLowerCodeDescription318milligrams per literAveraging MethodMonitoring FrequencyReporting RequirementsCodeDescriptionCodeDescription	Туре	Co	de		C	escription				Ref	erence Test	Method	
ParameterManufacturer Name/Model No.CodeDescriptionManufacturer Name/Model No.CodeLimitLimit UnitsUpperLowerCode2318milligrams per literAveraging MethodMonitoring FrequencyReporting RequirementsCodeDescriptionCodeCodeDescription								ſ	Nethod	25A o	r 25B, Met	hod 21. I	Method 2A
Code Description Manufacturer Name/Model No. Image: Second stress of the second stre				Parame	ter							/	
	Code			De	escriptio	n			Ν	vlanuta	cturer Nam	ne/Model	NO.
Limit Limit Units Upper Lower Code Description 2 318 milligrams per liter Averaging Method Monitoring Frequency Reporting Requirements Code Description Code Description													
Upper Lower Code Description 2 318 milligrams per liter Averaging Method Monitoring Frequency Reporting Requirements Code Description Code Description			Lin	nit						Limit l	Jnits		
2318milligrams per literAveraging MethodMonitoring FrequencyReporting RequirementsCodeDescriptionCodeDescriptionCode		Upper			Lower		Code			[Description		
Averaging Method Monitoring Frequency Reporting Requirements Code Description Code Description Code Description		2					318			millig	rams per	liter	
CodeDescriptionCodeDescription		Averaging	Method			Monitor	ring Frequenc	У		Re	porting Red	quiremen	ts
	Code	[Descriptio	n	Cod	e	Descriptio	n	Со	ode	C	escriptio	n
60 Maximum - Not to Exceed Stated Value - See Monitoring Description 14 As Required - See Permit Monitoring Description 15 Annually (Calendar)	60	Maximum - Not to Excer	ed Stated Value - Se	e Monitoring Description	14	As Requ	ired - See Permit Monit	oring Descriptio	ⁿ 1	5	Annua	ally (Cale	endar)

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Section III - Facility Information

			Facility	/ Com	pliance C	ertification	n (conti	nuatio	n)		
					Rule	e Citation					
Title	Туре	Part	Subpa	art	Section	Subdivision	n Para	agraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal Re	equiremen	t 🛛		CA	AS No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent	N (Capping	0NY998-00-0) and 0NY100-00-0		V	OC and Total	HAP	
				ſ	Monitorir	ng Informa	tion				
🗖 Continuo	ous Emission	Monitorin	ıg		🗆 Monitori	ing of Process	s or Cont	rol Devid	ce Parameters as	a Surrogat	te
🗖 Intermitt	tent Emissio	n Testing		I	🛛 Work Pra	actice Involvii	ng Specif	ic Opera	tions		
🛛 Ambient	Air Monitor	ing			🗆 Record K	(eeping/Main	tenance	Procedu	ires		
					Des	scription					
thresholds VCUM1 w	ng conditio	R 231-6. ted at a m	aximum e	-RACk	on rate of 1 KM, RPM,	I0 mg/L. BSM, and C	DM.				.,
Work Prac	ctice Co	de	Pr	ocess N	Aaterial Description				Reference Te	st Method	
								Method	25A or 25B, Me	thod 21,	Method 2A
			Paramet	er				1	Manufacturer Na	ne/Mode	No.
Code			De	scriptic	on				nanaractarer Na		
0NY502000	40 C	CFR 60-6	3 - Total (Organ	ic Compo	unds (TOC)				
		Limi	it						Limit Units		
	Upper			Lowe	r	Code			Descriptio	1	
	10					318			milligrams pe	r liter	
	Averaging	Method			Monitor	ring Frequenc	cy		Reporting Re	quiremer	its
Code		escription		Coc	ae i	Descriptio	on	Co	ae	Descriptio	n .
60	Maximum - Not to Excee	ed Stated Value - See N	Monitoring Description	14	As Requ	ired - See Permit Mon	itoring Descript	ion 1	5 Annu	ally (Cal	endar)

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Section III - Facility Information

			Facility	/ Com	pliance (Certificatio	n (cont	inuatio	n)		
					Rul	e Citation					
Title	Туре	Part	Subpa	art	Section	Subdivision	n Par	agraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal Re	equirement	t _		C	AS No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent	× (apping	0NY998-00-	0 and 0NY100-00-0		V	/OC and Total I	HAP	
				Γ	Monitori	ng Informa	tion				
Continuc	ous Emission	Monitorin	g	[] Monitor	ring of Proces	s or Con	trol Devid	ce Parameters as a	a Surrogat	te
🗆 Intermitt	ent Emissio	n Testing		0	🛛 Work Pr	actice Involvi	ng Speci	fic Opera	tions		
🛛 Ambient	Air Monitor	ing		[□ Record	Keeping/Mair	itenance	e Procedu	ires		
					De	scription					
63, Subpa of 6 NYCF VRUTK wi	rt R. The ei RR 231-6. Ill be operat	mission ra ted at a ma n is applic	te shall al aximum e able for 1 [.]	so be l missio	imited to n rate of 2 (T, RPT.	keep total V	OC emi	ssions b	elow the applica	bility thre	esholds
Work Prac	ctice		Pr	ocess N	laterial						
Туре	Со	de		C	Description				Reference les	t Wethod	
								Method	25A or 25B, Me	thod 21,	Method 2A
	·		Paramet	er					Manufacturer Nar	ne/Model	No
Code			De	scriptio	n					ne/would	1110.
0NY502000	40 C	CFR 60-63	3 - Total (Organi	ic Compo	ounds (TOC	;)				
		Limi	t						Limit Units		
	Upper			Lower		Code			Description	1	
	2					318			milligrams per	⁻ liter	
Certe	Averaging	Method		6-	Monito	ring Frequen	су		Reporting Re	quiremer	its
Code	L	rescription		Cod	le	Descripti	UN			Descriptio	n la X
60	Maximum - Not to Excee	ed Stated Value - See M	Ionitoring Description	14	As Req	uired - See Permit Mor	itoring Descri	ption 1	5 Annu	ally (Cal	endar)

Continuation Sheet _____ of ____

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Section III - Facility Information

			Facility	/ Com	oliance C	ertification	(contin	uatio	n)		
					Rule	Citation					
Title	Туре	Part	Subpa	art	Section	Subdivision	Parag	graph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	e Federal Re	equiremen	it 🛛 🖓	Conning	CA	S No.			Contaminant Na	me	
🗖 State On	y Requireme	ent		apping	0NY998-00-0	and 0NY100-00-0		V	OC and Total	HAP	
				Ν	/lonitorir	ng Informati	ion				
Continuc	us Emission	Monitorin	ng	0] Monitori	ng of Process	or Contro	ol Devid	e Parameters as	a Surrogat	te
🗆 Intermitt	ent Emissior	n Testing		0	⊠ Work Pra	actice Involvin	g Specific	: Opera	tions		
Ambient	Air Monitor	ing			Record K	eeping/Maint	enance P	rocedu	res		
					Des	cription					
thresholds VCURR w	of 6 NYCR ill be operat	R 231-6. ted at a m	naximum e	emissio -RACK	n rate of 2	2 mg/L.					
Work Prac	tice		Pr	ocess N	laterial						
Туре	Co	de		D	escription				Reference Te	stivietnod	
							Ν	/lethod	25A or 25B, Me	thod 21,	Method 2A
			Paramet	er				ſ	Manufacturer Na	ne/Mode	No
Code			De	scriptio	n						
0NY502000	40 C	FR 60-6	3 - Total (Organi	c Compo	unds (TOC)					
		Lim	it						Limit Units		
	Upper			Lower		Code			Descriptio	1	
	2					318			milligrams pe	r liter	
Codo	Averaging	Method		Cod	Monitor	ing Frequency	/		Reporting Re	quiremer	its
code	U	rescription									nn dar)
00	waximum - Not to Excee	u stated Value - See I	wonitoring Description	14	As Requ	irea - See Permit Monito	ang Description	1	S Annu	any (Cal	enuar)

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Section III - Facility Information

			Facility Cor	mpliance (Certification	(continuatio	n)		
				Rul	e Citation				
Title	Туре	Part	Subpart	Section	Subdivision	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7						
🗵 Applicab	le Federal R	equirement		C	AS No.		Contaminant Na	me	
🗆 State On	ly Requirem	ent	🗷 Сарри	0NY998-00-	0 and 0NY100-00-0	١	/OC and Total I	HAP	
				Monitori	ng Informat	ion			
Continua	ous Emission	Monitoring	5	Monitor	ring of Process	or Control Devi	ce Parameters as a	Surrogat	:e
🗆 Intermitt	ent Emissio	n Testing		🗵 Work Pr	actice Involvin	g Specific Opera	ations		
□ Ambient	Air Monitor	ing		Record	Keeping/Maint	tenance Procedu	ures		
				De	scription				
the tank The annu Records o storing cru	since the al average f the month ide oil shall	previous s will be rolle nly crude oi be kept or	ae on win be c sample. RVP ed monthly. I samples take n site for a per	of crude oil of crude oil en in accord iod of five y	dance with the	e Department	ased on an annua	al averag	P for tanks
This cappi	ng conditio	n is applica	able for 1-TAN	IK1, CR1					
Work Pra	ctice		Process	Material			Reference Tes	t Method	
Туре	Co	de		Description	1			e meenou	
			Parameter				Manufacturer Nan	ne/Model	No.
Code			Descript	lion					
36	Rei	d vapor pre	ssure						
		Limit	:				Limit Units		
	Upper		Low	er	Code		Description		
	12.5				291	pour	nas per square inch	1	
<u></u>	Averaging	Method		Monito	ring Frequenc	y C	Reporting Re	quiremen	ts
Code			C	ode	Descriptio	n Co		Jescriptio	n
63	see moi	nitoring des	cription				15 Annua	ally (Cale	endar)

Continuation Sheet _____ of ____



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Section III -	Facility	Information
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			Facility	/ Comp	oliance C	ertificatio	n (c	ontinuatio	n)		
					Rule	e Citation					
Title	Туре	Part	Subpa	art	Section	Subdivisio	n	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal R	equirement			CA	AS No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent	N C	Capping	0NY998-00-0) and 0NY100-00-0		V	OC and Total I	HAP	
				Ν	/lonitorii	ng Informa	atior	n			
Continua	ous Emission	Monitoring		[] Monitor	ing of Proces	ss or	Control Devic	e Parameters as a	a Surrogat	e
🗆 Intermit	tent Emissio	n Testing		6	S Work Pr	actice Involv	ing S	pecific Opera	tions		
🗆 Ambient	Air Monitor	ing		0	□ Record k	(eeping/Maii	nten	ance Procedu	ires		
					Des	scription					
keep indiv Facility wid for various oil, the foll kilogallon	idual HAP de emissior s operating owing equi (Kgal) of cr	emissions I ns were def scenarios. valencies s ude oil is e	below 9.5 For the phall be us quivalent	i tons/y using t purpose sed to to:	rr which is he most c e of deter determine	less than t current AP-4 mining com complianc	he a 42 fo pliar e wit	pplicability ti ormulas. The nce based o th alternative	hresholds of 40 (e throughput limi n source-wide th e operating scen	CFR 63 S ts were o iroughpu arios. E	Subpart R. calculated t of crude ach
Operating = to One (Scenario L 1) Kgal of (1 0.81 0.2	oading Equ Crude Oil	uivalent (Kgal)	Cri #Cl #Cl #Cl	ude Operati RD1: Loadii RD2: Marin RD3: Marin	ing S ng a e loa e loa	Scenario (OS t marine doc ading of iner ading with Ve	S) k at 2 mg/L with ted vessels at 2 CUM1 (10 mg/L)	vac assi mg/L (99 with vac	st .9%) e assist
Compliand	ce will be de	etermined b	based on	the fol	lowing eq	uation:					
Total Thro	ughput of r	efined proc	lucts (kga	al) = (kę	gal loadeo (kgal loac	d from OS # led from OS	±1) + 6 #3	(kgal loade / 0.2)	d from OS #2 / 0	.81) +	
(Continued	1)										
Work Pra	ctice		Pro	ocess M	laterial				Reference Tes	t Method	
Туре	Co	de		D	escription				Reference les	t Methou	
03	27	71		C	Crude Oil						
			Paramet	er					Appufacturar Nan		No
Code			De	scriptio	n					ile/iviouel	NU.
		Limit							Limit Units		
	Upper			Lower		Code			Description	I	
45	0,000,000					15			gallons		
	Averaging	Method			Monito	ring Frequen	су		Reporting Re	quiremen	ts
Code	[Description		Cod	e	Descripti	ion	Co	ode [Descriptio	n
71	Annual To	tal Rolled	Monthly	05		Monthl	ly	1	5 Annua	ally (Cal	endar)
	2								ntinuation Chao	L 0	-

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	DEC ID													
-					I									

			Facilit	y Com	pliance C	ertification	(continu	ation)			
					Rule	Citation					
Title	Туре	Part	Subp	bart	Section	Subdivision	Paragra	iph Si	ubparagraph	Clause	Subclause
Applicab	le Federal F	Requireme	nt 🖂	Conning	CA	AS No.		Co	ntaminant Nar	ne	
State On	ly Requiren	nent		Capping							
				ſ	Monitorir	ng Informati	ion				
Continua Continua	ous Emissio	n Monitori	ng	[Monitori	ing of Process	or Control	Device Pa	arameters as a	Surrogat	e
□ Intermit	tent Emissio	on Testing		l	U Work Pra	actice Involvin	g Specific C	peration	IS		
L Ambient	Air Monito	oring	_		Record K	eeping/Maint	enance Pro	cedures	_	_	_
					Des	scription					
Maximum OS#CRD OS#CRD2 OS#CRD3	annual thr 1: 450,000 2: 364,500 3: 90,000	oughput c ,000 gallo ,000 gallo ,000 gallo	of each cru ns (assum ns (assum ns (assum	ude ope nes all o nes all o nes all o	rating sce ther OS a ther OS a ther OS a	nario assumi re zero) re zero) re zero)	ng no load	ling und	er any other (OS is as	follows:
VCUM1 w	ill not be u	sed to loa	nd inerted	vessels							
This capp	ing condition	on is appli	icable for (3-RACK	м - СDМ,	FGM.					
Work Pra	ctice	ada 🗌	Р	rocess N	Aaterial			I	Reference Test	t Method	
туре	C	oue		L	Description						
			Deve		_	_	_	_	_	_	_
Code			Parame	escrintio	n			Man	ufacturer Nam	ne/Model	No.
Couc				cocriptio	/11						
		Lin	nit					Lin	nit I Inits		
	Upper			Lowei	r	Code			Description		
	Averaging	g Method			Monito	ring Frequency	/		Reporting Rec	quiremen	its
Code		Description	n	Coc	le	Description	n	Code	C	Descriptio	n
								Contir	uation Sheet	tof	f



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Section III - Facility Information

			Facility	/ Comp	oliance C	ertificatio	n (coi	ntinuatio	n)		
					Rule	Citation					
Title	Туре	Part	Subpa	art	Section	Subdivisio	n P	Paragraph	Subparagraph	Clause	Subclause
6	NYCRR	201	7								
🗵 Applicab	le Federal Re	equirement			CA	AS No.			Contaminant Na	me	
🗆 State On	ly Requirem	ent		apping	0NY998-00-0	and 0NY100-00-0		V	OC and Total I	HAP	
				Ν	/lonitorir	ng Informa	tion				
Continua Continua	ous Emission	Monitoring] Monitori	ing of Proces	ss or Co	ontrol Devic	e Parameters as a	Surrogat	e
🗆 Intermitt	ent Emissio	n Testing		D	S Work Pra	actice Involv	ing Spe	ecific Opera	tions		
Ambient	Air Monitor	ing		0	Record K	eeping/Mai	ntenan	nce Procedu	res		
					Des	scription					
The emissi	ons rate of t	the vapor co	ontrol dev	rices sh	all be limit	ed to keep t	otal H	AP emissio	ns below 23.75 to	ons/yr an	d keep
individual H	AP emissic	ons below 9.	.5 tons/yr	which i	is less that	n the application of AD 4	ability 1	thresholds	of 40 CFR 63 Sul	bpart R. F	acility
operating s	cenarios.	elenninea l	using the	most ci			z. me	linougripu			vanous
This cappir	ng condition	is applicabl	le for refir	ned pro	duct loadir	ng at all load	ding ra	icks. The fa	cility may load up	to 1.929	billion
gallons of a	any refined p	product. Fo	r the purp	pose of	determinir	ng complian	ce bas	sed on sour	ce-wide through	out of gas	oline, the
following e	quivalencies	s shall be us	sed to det	ermine	compliant	ce with alter	native	operating s	scenarios. Each k	ilogallon	(Kgal) of
Qasoline is	equivalent i Scenario Loa	lo: dina Equival	ent (Kaal)) = to							
One (1) Kga	al of Gasoline	enig Equival e	chi (rtgai)) — 10	Ref	ined Produc	t Oper	rating Scen	ario (OS)		
	1				#1:	Loading at	truck, i	rail and/or r	marine at 2 mg/L	with vac	assist
	0.81				#2:	Marine load	ling of	inerted ves	sels at 2 mg/L (9	9.9%)	
	0.2				#3: #4·	Marine load	ling wi ha with	th VCUM1	(10 mg/L) with va	ic assist 8 ma/l fu	aitives)
	0.2				#4. #5	Rail loading	with r	no vac assi	st (2 mg/L and 8)	ma∕l fuai	tives)
	0.2				<i>"</i> 0.	i tan loading	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ing/E lugi	
Complianc	e will be det	ermined ba	sed on th	e follow	ving equat	ion:					
Total Throu	ughput of re	fined produ	cts (kgal)	= (kgal	loaded fro	om OS #1) +	⊦ (kgal	loaded from	m OS #2 / 0.81) +	-	
		(kgal loaded	d from OS	5 #3 / 0	.2) + (kgal	loaded from	n ÖS #	#4 / 0.2) + (l	kgal loaded from	OS #5 / ().2)
(Continue)	4)										
	~) 										
Work Prac		do	Pro		laterial				Reference Tes	t Method	
02		ue –									
03	1	/	<u> </u>		asoline						
Codo			Paramet	er	<u> </u>				Aanufacturer Nan	ne/Model	No.
Code			De	scriptio	n						
	Lines	Limit		1.0000					Limit Units		
	opper			Lower		Code			Description		
1,92	28,300,000					15			gailons		
	Averaging	Method			Monitor	ring Frequen	су		Reporting Re	quiremen	ts
Code		Description		Cod	e	Descripti	ion	Co	de	Descriptio	n
71	Annual To	otal Rolled	Monthly	05		Month	ly	1	5 Annua	ally (Cale	endar)

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	DEC ID													
-					I									

			Facility	Compl	iance C	ertificatior	n (cont	inuatio	n)				
	Rule Citation Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause												
Title	Туре	Part	Subpa	rt S	Section	Subdivisior	n Par	agraph	Subparagrap	n Clause	Subclause		
Applicab	le Federal R	equirement			CA	S No.			Contaminant N	lame			
□ State On	ly Requirem	ent	ĭ Ca	apping									
				M	onitorir	ng Informa	tion						
Continuo	us Emission	Monitoring	5		Monitori	ing of Proces	s or Con	trol Devid	ce Parameters a	s a Surroga	te		
🗆 Intermitt	ent Emissio	n Testing			Work Pra	actice Involvi	ng Speci	ific Opera	tions				
Ambient	Air Monitor	ring			Record K	eeping/Main	tenance	e Procedu	ires				
					Des	cription							
Maximum annual throughput of each operating scenario assuming no loading under any other OS is as follows: OS#1: 1,928,300,000 gallons (assumes all other OS are zero) OS#2: 1,561,923,000 gallons (assumes all other OS are zero) OS#3: 385,660,000 gallons (assumes all other OS are zero) OS#4: 385,660,000 gallons (assumes all other OS are zero) OS#5: 385,660,000 gallons (assumes all other OS are zero) VCUM1 will not be used for loading inerted vessels. This capping condition is applicable for 1-RACKT - RPT, FGT, 2-RACK2R - RPR, FGR & 3-RACKM - RPM, BSM, FGM. The process material selected is gasoline, however this limit applies to all refined product.													
Work Prac	tice		Pro	ocess Ma	terial			-	Reference T	est Methoo	ł		
Туре	Co	ode		De	scription								
Cada			Paramete	er				- r	Manufacturer N	ame/Mode	l No.		
Code			Des	cription									
									Line in Line in				
	Unner	Limit		Lower		Code			Limit Units	าท			
	opper			LOWER		Coue			Descripti				
	Averaging	Method			Monitor	ing Frequence	SV		Reporting	equiremen	nts		
Code		Description		Code	women	Descriptio	on line	Co	ode	Descriptio	on		
		1.000											
								Co	ntinuation She	et o	f		





Section III - Facility Information

	Facility Compliance Certification (continuation) Rule Citation												
	Rule Citation Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause												
Title	Туре	Part	Subpa	art	Section	Subdivision	Paragr	aph	Subparagraph	Clause	Subclause		
6	NYCRR	201	7										
🗵 Applicab	le Federal R	equirement			C/	AS No.		(Contaminant Na	me			
□ State On	ly Requirem	ent	× C	Capping	0NY998-00-	0 and 0NY100-00-0		V	OC and Total	HAP			
				ſ	Monitori	ng Informati	on						
Continua	ous Emission	Monitoring	g		☐ Monitor	ing of Process of	or Control	Device	Parameters as	a Surroga	te		
□ Intermit	tent Emissio	n Testing		1	⊠ Work Pr	actice Involving	g Specific (Operati	ions				
Ambient	Air Monitor	ing		I	Record I	keeping/Mainte	enance Pro	ocedur	es				
					De	scription							
Tank mair Emissions This capp	Fank maintenance emissions will not exceed 22 tons on a rolling annual basis. Emissions will be calculated using the latest version of AP-42. Fhis capping condition is applicable for 1-TANK1, RP1, CR1, BS1												
Work Pra	ctice		Pr	ocess N	laterial				Reference Tes	t Method			
Туре	Co	de		C	Description				Actorence Te:	, iniciliou			
			Paramet	ter				М	anufacturer Nar	ne/Mode	l No.		
Code			De	scriptio	n								
									1 ins it 1 in its				
	Unner	Limi	L			Code			Description	2			
	opper			Lower		24			tons	•			
	Averaging	Method			Monito				Reporting Pe	quiremer	nts		
Code		Description		Cor	le	Description	1	Cod	le	Descriptic	on		
17	annual max	kimum rolled	monthly	0)5	monthly		15	5 Annu	ally (Cal	endar)		
L				I					1	, (2 an	,		

Continuation Sheet _____ of ____





	Facility Compliance Certification (continuation)												
	Title Type Part Subpart Section Subdivision Paragraph Subparagraph Clause Subclause												
Title	Туре	Part	Subpa	art	Section	Subdivisio	n Par	ragraph	Sub	paragraph	Clause	Subclause	
40	CFR	64											
🗵 Applicab	le Federal R	equirement			CA	AS No.			Conta	aminant Nai	ne		
🗖 State On	ly Requirem	ent		apping	0NY9	98-00-0				VOC			
				Ν	/lonitorir	ng Informa	ation						
Continuc	ous Emission	Monitoring	S	[🛛 Monitori	ing of Proces	s or Con	ntrol Devic	ce Para	meters as a	Surrogat	ie	
🗆 Intermitt	ent Emissio	n Testing		0	Generation Work Pra	actice Involv	ing Speci	ific Opera	tions				
□ Ambient	Air Monitor	ing			Record K	eeping/Mai	ntenance	e Procedu	ires				
					Des	scription							
A CEMS is the system The follow Indicator 1 in the carb obtained c cycle of ei excursion Indicator 2 once per c The greate reading. T limit, a sec minutes per attain at le The facility and (c)(2).	A CEMS is used as the continuous monitoring parameter for CAM. Daily drift checks are performed automatically by the system. Daily drift checks are used to evaluate if the CEM needs to be calibrated. The following parameters will be monitored when the CEMS is not operational: Indicator 1: Temperature - The temperature of the carbon bed will be monitored and recorded daily via a probe inserted in the carbon bed. If the temperature is between 175 and 200 degrees F, a second temperature reading will be obtained during the next loading cycle of that carbon bed. If the temperature exceeds 200 degrees F during a loading cycle of either carbon bed, an excursion has occurred. If the second temperature reading exceeds 175 degrees F, an excursion has occurred. Indicator 2: Vacuum - The facility will monitor the operating vacuum of each carbon bed during a regeneration cycle once per day and manually record the vacuum. The greatest vacuum during one regeneration cycle of each bed shall be manually recorded based on the gauge reading. The duration of the reading shall be one complete cycle. If the recorded value for either bed is less than the limit, a second reading shall be collected during the course of the net regeneration cycle of the bed, approximately 30 minutes per cycle. An excursion occurs if the operating vacuum of two consecutive regeneration cycles for a bed fails to attain at least 26" in Hg during both regeneration cycles of the bed. The facility shall comply with 40 CFR 64.7 and 64.9. Records shall be maintained in accordance with Part 201-6.4(c)(1) and (c)(2). This condition is applicable for VRUTK												
Work Prac	tice		Pr	ocess N	laterial								
Туре	Co	ode		D	escription				Ret	ference Tes	t Method		
	<u> </u>		Paramet	er				_	Manuf	acturer Nam		No	
Code			De	scriptio	n			· ·	vianura		ie/ would	NO.	
		Limit	t						Limit	Units			
	Upper			Lower		Code				Description			
											•		
Codo	Averaging	Method		Cort	Monitor	Ing Frequen	су		Re	eporting Re	quiremen	its	
code	6 bour		rage	Cod	e	Descript	ion		de		vescriptio		
30		oning ave	aye	03		Daily		1	4	Semi-An	nually (C	Jalendar)	





Section III - Facility Information

	Facility Compliance Certification (continuation)												
	Title Type Part Subpart Section												
Title	Туре	Part	Subpa	art	Section	Subdivisio	n Para	graph	Sub	paragraph	Clause	Subclause	
40	CFR	63	BBBB	BB	11092	b							
🗵 Applicab	le Federal R	equirement	<u> </u>	I	CA	AS No.			Cont	aminant Nai	ne		
□ State On	lv Requirem	ent		Capping									
	.,			Λ	/onitorir	ng Informa	tion						
	us Emission	Monitoring	r		Monitori	ing of Proces	s or Contr	ol Devic	e Para	ameters as a	Surrogat	ρ	
	ont Emission	n Testing	•	с Г		actice Involv	ing Specifi	c Opera	tions	anneters as a	Junogat	.e	
Π Amhient	Air Monitor	in resultig		г Г		eening/Mai	ntenance	e opera Procedu	ires				
		IIIg		L		crintion	litenance	roceuu	163				
					Des	Scription							
The Term	ninal will use	e a VRU wi	ith a Con	tinuous	Emissior	ns Monitorin	g System	n (CEM	S) ca	pable of me	easuring	organic	
compound	d concentra	tion per 40	CFR 63.	11092((b)(1)(i)(A). The aver	age hydr	ocarbo	n outle	et percent v	vill be m	onitored to	
ensure it	ensure it does not exceed a six hour average limit of 0.2 vol% propane (2000 ppm), which corresponds to the permitted												
limit of 2	ma/L. The	averaging	time is a	six hou	r rolling a	verage. In	the event	of CEN	AS do	wntime, alt	ernative		
monitorin	g paramete	rs will be o	bserved	in acco	rdance wi	th 40 CFR	63.11092	(b)(1)(i)(B).				
Each cale	endar montl	h the vapor	- collectio	n syste	m and va	por process	sing syste	em shal	l be ir	nspected du	uring load	ding	
events fo	r total orgar	nic compou	inds liquio	d or vap	oor leaks.	For purpos	es of this	paragr	aph, s	sight, soun	d or sme	ll are	
acceptab	acceptable inspection/detection methods. Each detection of a leak shall be recorded and the source of the leak												
repaired	repaired												
This con	dition applie	es to VRUT	ĸ										
			IX .										
Work Pra	ctice	·	Pr	ocess M	aterial				Re	ference Tes	t Method		
Туре	Со	de		D	escription								
			Paramet	er					Manuf	acturor Nam		No	
Code			De	scriptio	n			I	vialiui		ie/iviouei	INO.	
		Limit							Limit	Units			
	Upper			Lower		Code				Description			
	Averaging	Method			Monitor				Р	enorting Por	nuiromon	tc	
Codo	rveraging			Cod		Descripti	on	C	N Ndo)escriptio	n	
20	6 hour r	olling ave	rage			Descripti							
30		oning ave	laye	03		Daily		1	4	Semi-An	nually (C	Jaiendar)	

Continuation Sheet _____ of ___





Section III - Facility Information

	Facility Compliance Certification (continuation) Rule Citation												
		-			Rul	e Citation							
Title	Туре	Part	Subp	bart	Section	Subdivisio	on	Paragra	ph	Subpa	iragraph	Clause	Subclause
40	CFR	64											
🗵 Applicab	le Federal R	equiremen	t _		C	AS No.				Contar	ninant Nai	ne	
🗖 State On	ly Requirem	ient		Capping	0NY	998-00-0				١	VOC		
				Ν	/lonitori	ng Informa	atio	n					
Continuc	ous Emission	n Monitorin	g	Þ	Monito	ring of Proce	ss or	Control	Devic	e Param	eters as a	Surrogat	e
🗆 Intermitt	ent Emissio	n Testing		0	G Work Pi	actice Involv	ing S	Specific O	perat	tions			
🛛 Ambient	Air Monitor	ring		0	Record	Keeping/Mai	inten	ance Pro	cedu	res			
					De	scription							
The comb temperatu	ustion temp re monitori	perature sl ng device	hall be m shall hav	onitored	l pursuan curacy of	t to 40 CFR	R 64. ht (19	3(a) by a %) of the	a con e tem	itinuous Iperatur	s tempera re being i	ature mo neasure	nitor. The d in
degree Ce	entigrade o	r plus or m	iinus five	tenth de	egree Ce	ntigrade (+/	- 0.5	o degree	s C)	whiche	ver is gre	ater.	
The monite performan An excurs	The monitored operating parameter value (MOPV) shall be determined from manufacturer's guarantee until the next performance test. An excursion occurs if the average temperature is below the MOPV as monitored by the CPMS for												
any 6 hou	any 6 hour period rolling period. The facility shall also comply with monitoring and recordkeeping requirements of 40 CFR 64.7 and 64.9. Reports shall include, at a minimum, the following information, as applicable:												
A summar	CFR 64.7 and 64.9. Reports shall include, at a minimum, the following information, as applicable: A summary of the information on (1) the number, duration and cause (including unknown cause, if applicable) of												
excursions duration a	A summary of the information on (1) the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and corrective actions taken; and (2) the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime accessing duration and cause and energy of the daily adjustment of the paper of the daily adjustment of the paper of the daily adjustment of the paper of the daily adjustment of the paper of the paper of the daily adjustment of the paper of the pape												
The follow Once each operation presence of	ing parame n day, while is that the p of a flame.	eters will b e VCUM1 pilot is lit fo An excurs	e monito is operati or loading ion occui	red whe ng, the i operati rs if the	n temper permittee ons and product i	ature monit will inspec the Ultravio s being loac	t the let F	g is not o VCU fo lame de without t	pera r prop tection ne pi	ational: per ope on equi lot flam	eration. P pment in e being I	roper dicates tl it.	he
This condi	tion is appl	licable for	VCUM1										
Work Prac	ctice		Р	rocess M	laterial					Pofo		t Mothod	
Туре	Co	ode		D	escriptior	۱				Refe	rence res	t Methou	
	1:	28			VOC								
			Parame	eter					Ν	/lanufac	turer Nan	ne/Model	No.
Code			D	escriptio	n								
03			Ter	nperatu	ire								
		Lim	it							Limit U	nits		
	Upper			Lower		Code	2			D	escription		
						44				degree	es Fahre	nheit	
	Averaging	Method			Monito	oring Frequer	псу			Rep	orting Re	quiremen	ts
Code	[Description		Cod	e	Descript	ion		Со	de	[Descriptio	n
30	6-hr F	Rolling Ave	erage	14	As Re	quired - See permit m	onitoring	g description	1	5	Annua	ally (Cale	endar)

Continuation Sheet _____ of ____

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Section III - Facility Information

	Facility Compliance Certification (continuation) Rule Citation												
					Rı	ule Cita	tion						
Title	Туре	Part	Sub	part	Section	n Sub	divisio	n Pa	aragraph	Subp	baragraph	Clause	Subclause
40	CFR	64											
🗵 Applicab	le Federal R	Requireme	nt			CAS No.				Conta	iminant Nai	ne	
🗖 State On	ly Requirem	nent		Capping	0N	Y998-0	0-0				VOC		
				Ν	Monito	ring Inf	forma	tion					
Continua	ous Emissior	n Monitori	ng	[🗵 Monit	toring of	Proces	s or Co	ontrol Dev	ce Para	meters as a	Surrogat	e
🗆 Intermitt	tent Emissic	on Testing		[□ Work	Practice	Involvi	ng Spe	ecific Oper	ations			
Ambient	Air Monito	ring		[□ Recor	d Keepin	ıg/Maiı	ntenan	ice Proced	ures			
					D	Descript	tion						
The comb temperatu degree Ce The monit next perfo An excursi any 6 hou CFR 64.7 A summar excursions cause (inc with zero a	temperature monitoring device shall have an accuracy of one percent (1%) of the temperature being measured in degree Centigrade or plus or minus five tenth degree Centigrade (+/- 0.5 degrees C) whichever is greater. The monitored operating parameter value (MOPV) shall be determined from manufacturer's guarantee until the next performance test . An excursion occurs if the average temperature is below the MOPV as monitored by the CPMS for any 6 hour period rolling period. The facility shall also comply with monitoring and recordkeeping requirements of 40 CFR 64.7 and 64.9. Reports shall include, at a minimum, the following information, as applicable: A summary of the information on (1) the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and corrective actions taken; and (2) the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).												
The follow Once each operation i presence o This condi	ing parame n day, while is that the of a flame. tion is app	eters will e VCUM2 pilot is lit An excur licable for	be monito is opera for loadin sion occu	ored whe ting, the g operati Irs if the	n tempo permitt ions and product	erature i tee will it d the Ult t is being	monito nspec traviol g load	oring is t the V et Flar ed with	s not oper /CU for pi me detect hout the p	ational oper op ion equ bilot flar	: peration. F uipment ind me being li	roper dicates th t.	ne
Work Prac	ctice		I	Process N	1aterial					Rof	erence Tes	t Method	
Туре	Co	ode		D	Descripti	on				Rei	erence res	l Methou	
	1	28			VOC								
		· · ·	Param	eter						Manufa	acturer New		No
Code			۵	Descriptio	n					Ivialiula		ie/ wiouei	NO.
03			Те	mperatu	ure								
		Lin	nit							Limit	Units		
	Upper			Lower			Code				Description		
							44			degre	ees Fahre	nheit	
	Averaging	g Method			Moni	itoring Fr	requen	су		Re	eporting Re	quiremen	ts
Code		Descriptio	n	Cod	le	De	escripti	on	C	ode	[Descriptio	n
30	6-hr F	Rolling Av	/erage	14	As	Required - See	e permit mo	nitoring des	scription	15	Annua	ally (Cale	endar)
									C	ontinus	tion Shoot		

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	Facility Compliance Certification (continuation) Rule Citation													
					R	ule Ci	itation	_						
Title	Туре	Part	Subpa	art	Sectio	on S	ubdivisio	n	Paragr	aph	Sub	paragraph	Clause	Subclause
40	CFR	63	BBBBB	3B	11092	2	b							
🗵 Applicab	le Federal R	equirement		· · · · · ·		CAS N	No.				Conta	aminant Na	ime	
🗖 State On	ly Requirem	ent		Lapping	0N	IY998	8-00-0					VOC		
				Ν	Monito	oring	Informa	atio	n					
Continua	ous Emission	Monitoring		Ľ	Ϫ Monit	toring	of Proces	s or	Control	Device	Para	meters as a	a Surrogat	e
🗆 Intermit	ent Emissio	n Testing		0	U Work	<pre></pre>	ice Involv	ing S	Specific (Operat	ions			
Ambient	Air Monitor	ing		6	× Reco	rd Keej	ping/Mai	nten	ance Pro	ocedur	es			
					[Descri	iption							
per 40 CF until the n Monitoring	R 63.1109 ext perform g for compli	2(b)(1)(iii)(A nance test a iance per 4(s a six hour	A). The c at which t 0 CFR 63	complian ime it w 3.11092 verage	nce ter vill be c 2(b)(1)(mperat determ (iii)(B)	ture will I hined fror in the ev	be d m th /ent	letermir e test. of CPN	ned fro The T IS dov	om the ermir vntim	e manufac nal will follo e.	turer's gu ow Altern	uarantee ative
				verage.	•									
events for acceptabl	total orgar e inspectio	nic compound n/detection	nds liquid methods	d or vap s. Each	por leal detect	ks. Fo tion of	r purpos a leak s	sing ses c shall	of this p be reco	aragra orded a	aph, s and t	sight, sour he source	id or sme of the lea	ell are ak repaired
This con	This condition applies to VCURR													
Work Prac	ctice		Pr	ocess M	1aterial						Re	ference Te	st Method	
Туре	Co	ode		D	Descript	ion								
Code			Paramet	ter escriptio	n				_	N	lanufa	acturer Nai	me/Mode	l No.
		Limit									Limit	Units		
	Upper	2000		Lower			Code					Description	1	
	- 1- M - 1-													
	Averaging	Method			Mon	nitoring	requer				Re	onorting Re	auiremer	nts
Code	[Description		Cod	le		Descripti	ion		Cod	de		Descriptio	on
30	6-hour r	olling ave	rage	03	3		Dailv	,		14	1	Semi-Ar	nually ((Calendar)
		-	-											/





Section III - Facility Information

	Facility Compliance Certification (continuation)												
	Rule Citation Title Type Part Subpart Subdivision Paragraph Subparagraph Clause Subclause												
Title	Туре	Part	t Suk	part	Section	Subdivisio	n Para	agraph	Subpara	agraph	Clause	Subclause	
40	CFR	64											
🗵 Applicab	le Federal	Requirem	ent		C	AS No.			Contami	nant Nar	ne		
🗆 State On	ly Require	ment		I Capping	0NY	998-00-0			V	OC			
				ſ	Monitori	ng Informa	ation						
Continuc	ous Emissio	on Monito	oring		🗵 Monito	ring of Proces	s or Cont	trol Devid	ce Parame	eters as a	Surrogat	e	
🗆 Intermitt	ent Emissi	on Testin	g	I	🛛 Work Pr	actice Involv	ing Specif	fic Opera	tions				
□ Ambient	Air Monit	oring			□ Record	Keeping/Mai	ntenance	e Procedu	ires				
					De	scription							
The confiduction temperature shall be monitored pulsuant to 40 CPR 04.0(a) by a continuous temperature monitor. The temperature monitoring device shall have an accuracy of one percent (1%) of the temperature being measured in degree Centigrade or plus or minus five tenth degree Centigrade (+/- 0.5 degrees C) whichever is greater. The monitored operating parameter value (MOPV) shall be determined from the manufacturer's guarantee until the next performance test . An excursion occurs if the average temperature is below the MOPV as monitored by the CPMS for any 6 hour period rolling period. The facility shall also comply with monitoring and recordkeeping requirements of 40 CFR 64.7 and 64.9. Reports shall include, at a minimum, the following information, as applicable: A summary of the information on (1) the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and corrective actions taken; and (2) the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable). The following parameters will be monitored when temperature monitoring is not operational: Once each day, while the Rail Vapor Combustion Unit (VCURR) is operating, the permittee will inspect the VCU for proper operation. Proper operation is that the pilot is lit for loading operations and the Ultraviolet Flame detection equipment indicates the presence of a flame. An excursion occurs if the product is being loaded without the pilot flame being lit.													
Work Prac	rtice			Process N	Aaterial								
Туре	(Code		[Description	1			Refere	ence Test	Method		
		128			VOC								
			Param	eter					A		- / 0 0 1 1	NIE	
Code				Descriptic	on			ſ	vianufactu	urer Nam	ie/Model	NO.	
03			Τe	emperati	ure								
		L	.imit						Limit Uni	its			
	Upper			Lowe	r	Code			Des	scription			
						44			degrees	s Fahre	nheit		
	Averagin	g Method	1		Monito	ring Frequen	су		Repo	orting Rec	quiremen	ts	
Code		Descripti	ion	Coc	de	Descript	ion	Co	ode	C	escriptio	n	
30	6-hr	Rolling A	Average	14	As Rec	quired - See permit mo	onitoring descrip	otion 1	5	Annua	ally (Cale	endar)	
								Со	ntinuatio	on Sheet	0		

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New York State Department of Environmental Conservation

Air Permit Application



DEC ID				,			
	Section I	V - Emission Unit lı	nformation				
		Emission Unit Descripti	on	Continuation She	et(s)		
Emission Unit							
	<u> </u>						
		Building Information		Continuation She	ot(s)		
Building ID	Buildi	ing Name	Length (ft)	Width (ft) Orientat	tion		
Emission Unit							
	Er	mission Unit Emissions S	Summary	Continuation Sheet	:(s)		
CAS Number		Contamin	ant Name				
EPD (lbs/yr)	Potentia	I to Emit	Actua	l Emissions			
	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)			
CAS Number		Contamin	ant Name				
	Potentia	al to Fmit	Actuz	l Emissions			
ERP (lbs/yr)	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)			
CAS Number		Contamin	iant Name	•			
ERP (lbs/yr)	Potentia	I to Emit	Actua	Emissions			
	(lbs/nr)	(lbs/yr)	(lbs/hr)	(Ibs/yr)			
CAS Number		Contamir	ant Name				
Und Hummer							
	Potentia	al to Emit	Actua	Actual Emissions			
ERP (IDS/yr)	(lbs/hr)	(lbs/yr)	(lbs/hr)	(lbs/yr)			
		1					



	DEC ID												
					Emiss	ion Poin	t Info	ormatior	1			Continuation Sheet(s)	
Emission Poir	nt												
Ground		h+ (f+)	Height Ab	ove	Inside D	iameter	- ··	- (%	- \	(Cross S	ection	
Elevation (ft)) neig	nt (It)	Structure	(ft)	(i	n)	Exit	Temp. (I	-)	Length (in)		Width (in)	
Exit Velocity	/ Exit	Flow	NYTM (E)	(KM)	NYTM (N) (KM)	E	Building		Distance to Prop	erty	Date of Removal	
(FPS)	(AC	.FM)						-		Line (ft)			
										<u> </u>			
Emission Poir	nt					· .							
Ground Flevation (ft)	Heig	ht (ft)	Height Ab	ove (ft)	Inside D	n)	Exit	Temp. (°I	F)	Length (in)	Lross S	ection Width (in)	
)		Structure	(11)	(1)	,				Length (iii)		width (in)	
Exit Velocity	/ Exit	Flow								Distance to Prop	ertv		
(FPS)	(AC	FM)	NYTM (E)	(KM)	NYTM (N) (KM)	E	Building		Line (ft)	,	Date of Removal	
Emission Poir	nt									•			
Ground	Ground Height (ft) Height (ft)					Diameter		Tomn (°	= \	Cross		ection	
Elevation (ft))		Structure	(ft)	(i)	n)	EXIL	Temp. (-)	Length (in)		Width (in)	
Exit Velocity	Exit	Flow	NYTM (E)	(KM)	NYTM (N) (KM)	E	Building		Distance to Prop	erty	Date of Removal	
(FPS)	(AC	.FIVI)							_	Line (ft)			
				_		10							
Emission So	ource	l r	Date of	En	nission S	ource/C	ontro	ol Inform	Cor	ion		Continuation Sheet(s)	
ID		Cor	istruction	ogo agO	eration	Remo	val	Code		Description	Na	me/Model Number	
	,,											,	
Design			Design Ca	apacit	y Units	1			Wa	aste Feed		Waste Type	
Capacity	Code			Descr	iption			Code		Description	Code	e Description	
						-							
Emission So	ource		Date of	Da	ate of	Date	of		Cor	ntrol Type		Manufacturer's	
ID	Туре	Cor	istruction	Оре	eration	Remo	val	Code		Description	Na	me/Model Number	
Design			Decise C							ata Faad		Masta Tura	
Canacity	Code		Design Ca	Descr	ription			Code	VVa	Description	Code	Description	
Capacity	Couc			Deser	iption			Couc		Description	couc	Description	
Emission So	ource	[Date of	Da	ate of	Date	of		Cor	ntrol Type		Manufacturer's	
ID	Туре	Cor	struction	Оре	eration	Remo	val	Code		Description	Na	me/Model Number	
Design	Design Design Capacity				y Units				Waste Feed			Waste Type	
Capacity	Code			Descr	iption			Code		Description	Code	e Description	





Section IV - Emission Unit Information

Emission Point Information (continuation)											
Emission Unit	1 - T A	N K 1			Emission Po	Dint 0 T 1 1 4					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		1,440								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)						
		601.833	4720.724								
Emission Unit	1 - та	N K 1			Emission Po	Dint 0 T 1 1 5					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		1,800								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)	6	Property Line (ft)						
		601.833	4720.724								
Emission Unit	1 - та	N K 1			Emission Po	Dint 0 T 1 1 7					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	([°] F)	Length (in)	Width (in)					
	48		1,320								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFIVI)	(km)	(KM)		Property Line (ft)						
		601.833	4720.724								
Emission Unit	1 - T A	N K 1			Emission Po	oint 0 T 1 1 8					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section					
Elevation (ft)	(π)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		1,200								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FP3)	(ACFIVI)	601 694	(KIII) 4270.675		Property Line (It)						
Englacion Unit		001.03 4	4270.075		Enciesion De						
Emission Unit	T A	NKI		E. A. T	Emission Po						
Ground	Height (ft)	Height Above	Inside Diameter	Exit Temp.	Longth (in)	Section					
	/0	Structure (it)		(F)		width (m)					
	40		900								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to Property Line (ft)	Date of Removal					
(123)		601 762	4720 654		Froperty Line (it)						
		001.702	4720.004								

Continuation Sheet _____ of _____





Section IV - Emission Unit Information

Emission Point Information (continuation)											
Emission Unit	1 - T A	N K 1			Emission Po	Dint 0 T 1 2 0					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		960								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)	banang	Property Line (ft)	Dute of Hellioval					
		601.924	4720.601								
Emission Unit	1 - т а	N K 1			Emission Po	Dint 0 T 1 2 1					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		1,800								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)	building	Property Line (ft)	Bute of Kelliovar					
		601.833	4720.724								
Emission Unit	1 - т А	N K 1			Emission Po	oint 0 T 1 3 0					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
	48		900								
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)	5	Property Line (ft)						
		602.053	4720.551								
Emission Unit	-				Emission Po	pint					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM)	(km)	(km)	0	Property Line (ft)						
Emission Unit	-				Emission Po	bint					
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section					
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)					
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal					
(FPS)	(ACFM) (km)		(km)		Property Line (ft)						

Continuation Sheet _____ of _____



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Section IV - Emission Unit Information

Emission Source/Control (continuation)										
Emission Unit 1 – T A N K 1										
Emission Source		Date of	Date of	Date of	Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Code Description Name/Model No.		me/Model No.		
TK114	I									
Design		Design Ca	Design Capacity Units			Waste Feed		Waste Type		
Capacity	Code		Description		Code	Description	Code	Description		
3,887,898	15	gallons								
Emission Source		Date of	Date of	Date of	Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK115	Ι									
Design		Design Capacity Units			Waste Feed		Waste Type			
Capacity	Code		Description		Code	Description	Code	Description		
5,851,902	15		gallons							
Emissior	n Source	Date of	Date of	Date of		Control Type	N	Manufacturer's		
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK117	I									
Design		Design Capacity Units		Waste Feed		Waste Type				
Capacity	Code		Description		Code Description		Code	Description		
3,028,032	15		gallons							
Emissior	n Source	urce Date of Date of Date of		Control Type		Manufacturer's				
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK118	I									
Design		Design Ca	pacity Units		Waste Feed		Waste Type			
Capacity	Code		Description		Code	Description	Code	Description		
2,426,550	15		gallons							
Emissior	n Source	rce Date of Date of Date of		Control Type	Manufacturer's					
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK119	I									
Design		Design Capacity Units		Waste Feed		Waste Type				
Capacity	Code	Description		Code	Description	Code	Description			
1,619,268	15		gallons							
Emission Source		Date of Date of Date of		Control Type		Manufacturer's				
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK120	I									
Design		Design Capacity Units			Waste Feed		Waste Type			
Capacity	Code	Description		Code	Description	Code	Description			
1,640,940	15		gallons							



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Section IV - Emission Unit Information

Emission Source/Control (continuation)										
Emission Unit 1 – T A N K 1										
Emission Source		Date of	Date of	Date of	Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Name/Model No.			
TK121	I									
Design		Design Ca	pacity Units			Waste Feed	Waste Type			
Capacity	Code		Description		Code Description		Code	Description		
5,370,204	15		gallons							
Emission Source		Date of Date of Date of			Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK130	I									
Design		Design Ca	pacity Units		Waste Feed		Waste Type			
Capacity	Code		Description		Code	Description	Code	Description		
1,512,714	15		gallons							
Emissior	n Source	Date of	Date of	Date of	Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK31C	К				091	Floating Roof				
Design		Design Ca	pacity Units		Waste Feed		Waste Type			
Capacity	Code		Description		Code	Description	Code	Description		
Emissior	n Source	Date of	Date of	Date of		Control Type	Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK32C	К				091	Floating Roof				
Design	Design Capacity Units			Waste Feed		Waste Type				
Capacity	Code		Description		Code	Description	Code	Description		
Emissior	n Source	Date of Date of Date of		Date of	Control Type		Manufacturer's			
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.		
TK39C	К				091	Floating Roof				
Design		Design Ca	Design Capacity Units		Waste Feed		Waste Type			
Capacity	Code	Description		Code	Description	Code	Description			
Emission Source		Date of Date of Date of		Control Type		Manufacturer's				
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ime/Model No.		
T114C	К				091	Floating Roof				
Design		Design Capacity Units		Waste Feed		Waste Type				
Capacity	Code	Description		Code	Description	Code	Description			

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Section IV - Emission Unit Information

			Emission S	Source/Cont	rol (con	tinuation)		
Emission	n Unit 1	- T A N K	1					
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T115C	К				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T117C	K				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T118C	K				091	Floating Roof		
Design		Design Ca	pacity Units		Waste Feed		Waste Type	
Capacity	Code		Description		Code Description		Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T119C	K				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T120C	K				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
T121C	K				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description

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			Emission S	ource/Cont	rol (con	tinuation)		
Emissior	n Unit 1	- T A N K	1					
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
T130C	K				091	Floating Roof		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units		Waste Feed			Waste Type
Capacity	Code		Description		Code Description		Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description

New York State Department of Environmental Conservation

Air Permit Application



				Pro	cess Info	rmation				🗆 Conti	inuation	Shee	et(s)
Emission Unit	-	Т								Proc	ess	RF	> 1
				Pro	ocess Des	cription							
		_											
Source Classification	n Code (SCC	;)	Total Th	roughpu	ut ntity/Vr	Code		Through	put Quant	tity Units			
		Qu	iantity/11	Qua	1111119/11	Coue			Desc	πρισπ			
				Operati	ng Schedul	e							
Confidential			Hour	s/Day	Days	/Year	1	Building		Floor/Lo	ocation		
Operating at Max	kimum Capa	acity											
	Ţ		1	Emissi	on Point I	dentifie	er(s)						
			Emis	sion So	ource/Con	trol Ide	ntif	fier(s)					
Emission Unit	-									Proc	ess		
				Pro	ocess Des	cription							
			Total Th	roughpi	ut			Through	put Quant	tity Units			
Source Classification	n Code (SCC	⁽⁾ Qu	iantity/Hr	Qua	ntity/Yr	Code	e l		Desc	ription			
			(Operati	ng Schedul	е		Building		Floor/Lo	ocation		
\Box Operating at Max	kimum Capa	acitv	Hour	s/Day	Days	/Year		Building		11001720			
		-/				1						_	
				Emissi	on Point l	dentifie	er(s)						
			Emic	sion So			ntif	fior(s)					
			EIIIIS	51011 50	urce/con		iitii						
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Section IV - Emission Unit Information

			Pro	ocess In	formati	on (con	tinuatio	on)				
Emission Unit	1 - т	A N K	1							F	Process	C R 1
					Descr	iption						
Crude Oil storage	tanks us	ed for sto	orage ar	nd distrib	ution of	crude oil						
Source Classification	on Code	-	Total Thr	oughput		_		Throug	hput Qua	ntity Uni	ts	
(SCC)		Quant	ity/Hr	Quant	tity/Yr	Code			Dese	cription		
4-03-010-9	9				Disanating							
Confidential		_		Hrs/	/Day	Day	e rs/Yr	Buil	ding	Fl	loor/Locati	on
□ Operating at Max	imum Ca	oacity										
				Emissi	on Poin	it Identi	ifier(s)					
00T31, 00T32	00T39,	0T114	0T115,	, 0T117	0T ⁻	118	0T	119	0T <i>′</i>	120	0T1	21
	-		Emi	ssion Sc	ource/C	ontrol I	dentifie	er(s)	-			
TK031, TK31C	TK032,	TK32C	TK039,	TK39C	TK114,	T114C	TK115,	T115C	TK117,	T117C	TK118,	T118C
TK119, T119C	TK120,	T120C	TK121,	T121C								_
Emission Unit	1 - т	A N K	1							F	Process	PCW
					Descr	iption						
Wastewater tank c	ontamin	ated with	gasolin	e/distillat	e.							
Source Classificatio	on Code		Total Thr	oughput				Throug	hput Qua	ntity Uni	ts	
(SCC)		Quant	ity/Hr	Quant	tity/Yr	Code		Ū	Desc	cription		
□ Confidential				(Dperating	s Schedul	e	Buil	ding	F	loor/Locati	on
Operating at Max	imum Ca	pacity			Day	Day	5/11				_	
				Emissi	on Poin	t Identi	fier(s)					
0T130												
	I		Emi	ssion So	ource/C	ontrol I	dentifie	er(s)	L			
TK130	T13	30C										
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Emission Unit Description (continuation)
Emission Unit 1 - R A C K T
Truck loading rack





Section IV - Emission Unit Information

		Emission Po	oint Informatio	n (continuatio	n)	
Emission Unit	1 - R A	С К Т			Emission Po	Dint 0 T R K 1
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
17	19	0	12			
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
		602.004	4720.713			
Emission Unit	1 - R A	С К Т			Emission Po	Dint 0 T R K 2
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
Emission Unit	-				Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)	Dunung	Property Line (ft)	Dute of Kellioval
Emission Unit	-				Emission Po	pint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)	
Emission Unit					Emission Pc	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
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			Emission S	ource/Cont	rol (con	tinuation)			
Emission	n Unit 1	- R A C K	Т						
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ime/Model No.	
RACKT	I						Tru	ck Rack	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
880,000,000	18	gal	lons per year						
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ime/Model No.	
VRUTK	К	06/01/1990	08/01/1990		047	Vapor Recovery Sys	Zink Mo	odel AA 1218-11-7	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ime/Model No.	
VACTK	К						Vac Assist		
Design		Design Ca	apacity Units		Waste Feed		Waste Type		
Capacity	Code		Description		Code Description		Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ime/Model No.	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	



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Section IV - Emission Unit Information

			Pro	ocess Inf	formati	on (con	tinuatio	on)				
Emission Unit	1 - R	A C K	т							F	Process	R P T
					Descr	iption						
Emissions from loa	ading refi	ned proc	lucts at ⁻	Truck Ra	ick.							
Source Classification	on Code		Total Thr	oughput			-	Throug	hput Qua	intity Uni	ts	
(SCC)		Quant	ity/Hr	Quant	tity/Yr	Code			Dese	cription		
4-04-001-5	3											
 Confidential Operating at Max 	imum Ca	pacity		Hrs/	Dperatin Day	g Schedul Day	e rs/Yr	Buil	ding	F	loor/Locat	ion
				Emissi	on Poin	it Identi	ifier(s)					
0TRK1												
			Emi	ssion So	ource/C	ontrol I	dentifie	er(s)	1		1	
RACKT	VR	JTK										
Emission Unit	1 - R	A C K	Т							F	Process	FGT
					Descr	iption						
Fugitive emissions	s from loa	ading truc	cks at Tr	uck Racl	k.							
Source Classificatio	on Code	Quant	Total Thr ity/Hr	oughput	tity/Vr	Code		Throug	hput Qua	ntity Uni	ts	
	1	Qualit	rcy/111	Qualit	uruy/11	coue			Dest	nption		
□ Confidential □ Operating at Max	imum Ca	pacity		C Hrs/	Dperating 'Day	g Schedul Day	e rs/Yr	Buil	ding	F	loor/Locat	ion
				Emissi	on Poin	it Identi	ifier(s)					
0TRK2												
			Emi	ssion So	ource/C	ontrol I	dentifie	er(s)				
RACKT	VA	СТК										
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	Emission Unit Description (continuation)
Emission Unit	
Rail loading rack.	





		Emission Po	oint Informatio	n (continuatio	n)	
Emission Unit	2 - R A	C K R			Emission Po	Dint 0 R R K 1
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
19	37	0	90			
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
		601.86	4620.358			
Emission Unit	2 - R A	C K R			Emission Po	0 R R K 2
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
Emission Unit	-				Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)	
Emission Unit			-		Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	([°] F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFIVI)	(KIII)	(KM)		Property Line (It)	
Emission Unit					Emission Pc	pint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal



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			Emission S	ource/Cont	rol (con	tinuation)			
Emission	n Unit 2	2 - R A C K	R						
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
RACKR	I	01/01/1975	01/01/1975				Rail Rack		
Design		Design Ca	pacity Units			Waste Feed	Waste Type		
Capacity	Code		Description		Code	Description	Code	Description	
300,000,000	18	gal	lons per year	,					
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
VCURR	K	01/01/1975	01/01/1975		127	Thermal Oxidation			
Design		Design Ca	pacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
VACRR	К						va	c assist	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code Description		Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
Design		Design Ca	apacity Units			Waste Feed		Waste Type	
Capacity	Code		Description		Code	Description	Code	Description	
Emissior	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's	
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.	
Design		Design Ca	pacity Units			Waste Feed		Waste Type	
Capacity	Code	J	Description		Code	Description	Code	Description	



DEC ID												
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			Pro	ocess In	formati	ion (con	tinuati	ion)				
Emission Unit	2 - R	A C K	R							[Process	R P R
					Descr	iption						
Emissions associa	ted with	loading r	efined p	roduct ir	nto rail ca	ars at Ra	il Rack.					
Source Classification	on Code		Total Th	roughput				Throug	hput Qua	antity Uni	ts	
(SCC)		Quant	ity/Hr	Quan	tity/Yr	Code			Des	cription		
4-04-001-5	3											
 Confidential Operating at Max 	imum Caj	pacity		(Hrs,	Dperating /Day	g Schedul Day	e rs/Yr	- Buil	ding	F	loor/Locat	ion
				Emissi	on Poir	nt Identi	ifier(s)			1		
0RRK1												
			Emi	ssion So	ource/C	ontrol I	dentifi	er(s)	1		1	
RACKR	VCI	JRR										
Emission Unit	2 - R	A C K	R							ſ	Process	FGR
					Descr	iption						
Emissions associa	ated with	fugitive e	emission	ns from lo	bading ra	ail cars a	t Rail R	ack.	haut Que		**	
Source Classificatio	on Code	Ouant	itv/Hr	ougnput Ouan	titv/Yr	Code		Inroug	nput Qua Des	cription	ts	
4-04-001-5	1									1.11		
□ Confidential □ Operating at Max	4-04-001-51] Confidential] Operating at Maximum Capacity			(Hrs,	Dperating /Day	g Schedule Building Days/Yr			F	Floor/Location		
				Emissi	on Poir	nt Identi	ifier(s)					
0RRK2												
			Emi	ssion So	ource/C	ontrol I	dentifi	er(s)				
RACKR	VAC	CRR										
								Co	ntinuati	on Sheet	t of	



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Marine loading of refined products and crude oil at the marine dock.





Section IV - Emission Unit Information

		Emission Po	oint Informatio	n (continuatio	n)	
Emission Unit	3 - R A	С К М			Emission Po	Dint 0 M D R 1
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
	36		72			
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)	
		601.833	4720.724			
Emission Unit	3 - R A	СКМ			Emission Po	oint 0 M D R 2
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
	36		72			
Exit Velocity (FPS)	Exit Flow (ACEM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
(113)		602 056	4720 645			
Emission Unit	3 - R A	СКМ	11201010		Emission Pc	vint 0 M D R 3
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Duilding	Distance to	Data of Romaval
(FPS)	(ACFM)	(km)	(km)	Bulluing	Property Line (ft)	Date of Kellioval
Emission Unit					Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)	Bananis	Property Line (ft)	Dute of Kelliovar
Emission Unit	-				Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(173)						

Continuation Sheet _____ of _____



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Section IV - Emission Unit Information

			Emission S	ource/Cont	rol (con	tinuation)		
Emissior	n Unit 3	- R A C K	М					
Emission	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
RACKM	I							Marine Dock
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emission	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
VCUM1	К				127	Thermal Oxidation		
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
VCUM2	К				127	Thermal Oxidation	Zink 2	ZCM-2-6-35-X-2
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code Description		Code	Description
Emission	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
VACMD	К						va	c assist
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emission	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	me/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description

Continuation Sheet _____ of _____



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Section IV - Emission Unit Information

			Pro	ocess In	formati	ion (con	tinuati	on)					
Emission Unit	3 - R	A C K	М							[Process	R	ΡM
					Descr	iption							
Emissions from loa	ading ref	ined proc	lucts into	o marine	vessels).							
Source Classification	on Code		Total Th	oughput				Throug	hput Qua	intity Uni	ts		
(SCC)		Quant	ity/Hr	Quan	tity/Yr	Code			Desc	cription			
4-06-002-9	8				Inorating	T Schodul	0					_	
Confidential				Hrs,	/Day	Day	e /s/Yr	Buil	ding	F	loor/Loca	tion	
Operating at Max	imum Ca	pacity											
				Emissi	on Poir	nt Identi	ifier(s)						
0MDR1	OM	DR2											
			Emi	ssion So	ource/C	ontrol I	dentifi	er(s)					
RACKM VCUM1 VC				JM2									
Emission Unit	3 - R	A C K	М							I	Process	В	SM
					Descr	iption							
Emissions from lo	ading ble	ndstock	into mar	ine vess	els.			71					
Source Classificatio	on Code	Ouant	<u>Total Thi</u> itv/Hr	Oughput Ouan	titv/Yr	Code		Throug	hput Qua Desc	intity Uni	ts		
4-06-002-9	8	20.0.11		2	,,				2.000				
□ Confidential □ Operating at Max	4-06-002-98 Confidential Operating at Maximum Capacity			(Hrs,	Operating /Day	g Schedul Day	e vs/Yr	Buil	ding	F	loor/Loca	tion	
				Emissi	on Poir	nt Identi	ifier(s)						
0MDR1	0M	DR2											
			Emi	ssion So	ource/C	ontrol I	dentifi	er(s)	I				
RACKM	VC	JM1	VCI	JM2									
					-		•	Co	ntinuatio	on Sheet	of		

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	DEC ID												
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			Pro	ocess In	formati	ion (con	tinuati	ion)				
Emission Unit	3 - R	A C K	М							F	rocess	C D M
					Descr	iption						
Emissions from loa	ading cru	ide oil int	o marine	e vessels	5.							
Source Classification	on Code		Total Thi	roughput				Throug	hput Qua	ntity Uni	ts	
(SCC)		Quant	ity/Hr	Quan	tity/Yr	Code			Desc	cription		
4-06-002-9	8				O							
 Confidential Operating at Max 	kimum Ca	pacity		Hrs,	Jperatinį /Day	g Schedul Day	e s/Yr	- Buil	ding	F	oor/Loca	tion
				Emissi	on Poir	l nt Identi	ifier(s)					
0MDR1	0M	DR2						_				
			Emi	ssion So	ource/C	ontrol I	dentifi	er(s)				
RACKM	VCI	JM1	VCI	JM2				. /				
Emission Unit	3 - R	A C K	М		L				L	F	rocess	FGM
					Descr	iption						
Emissions associa	ated with	fugitive o	emission	is from lo	bading n	narine ve	ssels at	t dock.				
Source Classificatio	on Code	Quant	Total Thr		tity/Vr	Code		Throug	hput Qua	ntity Uni	ts	
4-04-001-5	51	Quan		Quan		Couc			0030			
Confidential Operating at Max	(Hrs,	Dperating /Day	g Schedul Day	e s/Yr	Buil	ding	F	oor/Loca	tion			
				Emissi	on Poir	nt Identi	ifier(s)					
0MDR3												
			Emi	ssion So	ource/C	Control I	dentifi	er(s)				
RACKM	VAC	CMD										
								Co	ntinuatio	nn Sheet	of	



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Emission Unit Description (continuation)								
Emission Unit 1 - FUGTV								
Facility-wide fugitive emissions from pumps, valves, and misc appurtenances.								





Section IV - Emission Unit Information

		Emission Po	oint Informatio	n (continuatio	n)	
Emission Unit	1 - F U	G T V			Emission Po	oint E P F U G
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	([°] F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to Property Line (ft)	Date of Removal
(113)		(KIII)	(KIII)			
Emission Unit	-				Emission Po	pint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity (FPS)	Exit Flow (ACFM)	NYTM (E) (km)	NYTM (N) (km)	Building	Distance to Property Line (ft)	Date of Removal
Emission Unit					Emission Pc	pint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)	
Emission Unit			_		Emission Po	bint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	([°] F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFIVI)	(KM)	(KM)		Property Line (ft)	
Emission Unit	-		·		Emission Po	pint
Ground	Height	Height Above	Inside Diameter	Exit Temp.	Cross S	Section
Elevation (ft)	(ft)	Structure (ft)	(in)	(°F)	Length (in)	Width (in)
Exit Velocity	Exit Flow	NYTM (E)	NYTM (N)	Building	Distance to	Date of Removal
(FPS)	(ACFM)	(km)	(km)		Property Line (ft)	

Continuation Sheet _____ of _____



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			Emission S	Source/Cont	rol (con	tinuation)		
Emissior	n Unit 1	- F U G T	v					
Emission	n Source	Date of	Date of	Date of		Control Type	N	1anufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
FUGTV	Ι						Facilit	y Wide Fugitives
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emission	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
Design		Design Ca	pacity Units	1		Waste Feed		Waste Type
Capacity	Code	0	Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type		lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description
Emissio	n Source	Date of	Date of	Date of		Control Type	N	lanufacturer's
ID	Туре	Construction	Operation	Removal	Code	Description	Na	ame/Model No.
Design		Design Ca	pacity Units			Waste Feed		Waste Type
Capacity	Code		Description		Code	Description	Code	Description



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			Pro	ocess In	formati	ion (con	tinuati	on)				
Emission Unit	1 - F	U G T	V							F	Process	F U G
					Descr	iption						
Facility-wide emiss	sions froi	m pumps	, valves	, flanges	, and mi	sc appur	tenance	es.				
Source Classification	on Code	0	Total Th	roughput	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Carla		Throug	hput Qua	ntity Uni	ts	
(SCC)		Quant	tty/Hr	Quant	tity/Yr	Code			Desc	cription		
					Inorating	a Schodul	<u>م</u>				_	
Confidential				Hrs/	/Day	Day	vs/Yr	Buil	ding	F	loor/Loca	tion
Operating at Max	timum Ca	pacity										
			1	Emissi	on Poir	nt Identi	ifier(s)					
EPFUG												
			Emi	ssion Sc	ource/C	Control I	dentifi	er(s)				
FUGTV												
			_									
Emission Unit	-									F	Process	
					Descr	iption						
Source Classificatio	on Code	0	Total Th	roughput	h:h: ///.e	Cada		Throug	hput Qua	ntity Uni	ts	
(SCC)		Quant	lty/Hr	Quant	tity/Yr	Code			Desc	cription		
					Inerating	T Schodul					_	
Confidential				Operating Schedule Hrs/Day Days/Yr Building			F	Floor/Location				
Operating at Max	timum Ca	pacity										
				Emissi	on Poir	nt Identi	ifier(s)	1				
	<u>.</u> 1		Emi	ssion Sc	ource/C	Control I	dentifi	er(s)				
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						N	lon-Ap	oplicability	/ Desc	ription						
								Rule Cita	tion							
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For any Consent Emission	emission t Order	on un Proce	its which	h are <u>no</u> C mission Source	t in com ertified Title	nplian progr Type	(<u>ce</u> at t ress rep Part	Compliance ne time of p ports are to Subpa	e Plar permit be sul Applie rt	application omitted e cable Fed Section	on, the a every 6 m eral Req Subdiv.	pplicant s onths be uirement Parag.	E shall co ginnin Subp	□ Cont omplet g / parag.	inuation te the fol / Clause	Sheet(s) lowing: Subcl.
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For any Consent Emission	emissi t Order i Unit	on un Proce	its which ess E Remo	h are <u>no</u> C mission Source edial Me	t in com ertified Title	nplian progr Type and In	(<u>ce</u> at t ress rep Part iterme	Complianc ne time of p ports are to Subpa diate Miles	e Plar bermit be sul Applic rt tones	application omitted e cable Fed Section	on, the a every 6 m eral Req Subdiv.	pplicant s onths be uirement Parag.	E shall ca ginnin Subp R/I	□ Cont omplet g / parag. Da	inuation :e the fol / Clause ate Schec	Sheet(s) lowing: Subcl.
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Department of Environmental Conservation

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Supporting Documentation and Attachments	
Required Supporting Documentation	Date of Document
□ List of Exempt Activities (attach form)	
Plot Plan	
Process Flow Diagram	
Methods Used to Determine Compliance (attach form)	
Emissions Calculations	
Optional Supporting Documentation	Date of Document
□ Air Quality Model Protocol	
Confidentiality Justification	
□ Ambient Air Quality Monitoring Plan or Reports	
Stack Test Protocol	
Stack Test Report	
Continuous Emissions Monitoring Plan	
□ Lowest Achievable Emission Rate (LAER) Demonstration	
□ Best Available Control Technology (BACT) Demonstration	
□ Reasonably Available Control Technology (RACT) Demonstration	
Toxic Impact Assessment (TIA)	
Environmental Rating Demonstration	
Operational Flexibility Protocol/Description of Alternate Operating Scenarios	
Title IV Permit Application	
Emission Reduction Credit (ERC) Quantification (attach form)	
Baseline Period Demonstration	
Use of Emission Reduction Credits (attach form)	
□ Analysis of Contemporaneous Emissions Increase/Decrease	
Other Supporting Documentation	Date of Document





List of Exempt Activities

Instructions

Applicants for Title V facility permits must provide a listing of each exempt activity, as described in 6 NYCRR Part 201-3.2(c), that is currently operated at the facility. This form provides a means to fulfill this requirement.

In order to complete this form, enter the number and building location of each exempt activity. Building IDs used on this form should match those used in the Title V permit application. If a listed activity is not operated at the facility, leave the corresponding information blank.

	Combustion		
Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location
(1)	Stationary or portable combustion installations where the furnace has a maximum heat input capacity less than 10 mmBtu/hr burning fuels other than coal or wood; or a maximum heat input capacity of less than 1 mmBtu/hr burning coal or wood. This activity does not include combustion installations burning any material classified as solid waste, as defined in 6 NYCRR Part 360, or waste oil, as defined in 6 NYCRR Subpart 225-2.	11	2 existing furnaces, 3 existing boilers, 6 new boilers
(2)	Space heaters burning waste oil at automotive service facilities, as defined in 6 NYCRR Subpart 225-2, generated on-site or at a facility under common control, alone or in conjunction with used oil generated by a do-it-yourself oil changer as defined in 6 NYCRR Subpart 374-2.		
(3)(i)	Stationary or portable internal combustion engines that are liquid or gaseous fuel powered and located within the New York City metropolitan area or the Orange County towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, or Woodbury, and have a maximum mechanical power rating of less than 200 brake horsepower.		
(3)(ii)	Stationary or portable internal combustion engines that are liquid or gaseous fuel powered and located outside of the New York City metropolitan area or the Orange County towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, or Woodbury, and have a maximum mechanical power rating of less than 400 brake horsepower.		
(3)(iii)	Stationary or portable internal combustion engines that are gasoline powered and have a maximum mechanical power rating of less than 50 brake horsepower.		
(4)	Reserved.		
(5)	Gas turbines with a heat input at peak load less then 10 mmBtu/hour		



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Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location
(6)	Emergency power generating stationary internal combustion engines, as defined in 6 NYCRR Part 200.1(cq), and engine test cells at engine manufacturing facilities that are utilized for research and development, reliability performance testing, or quality assurance performance testing. Stationary internal combustion engines used for peak shaving and/or demand response programs are not exempt.	6	Existing Generators
	Combustion Related		
(7)	Non-contact water cooling towers and water treatment systems for process cooling water and other water containers designed to cool, store or otherwise handle water that has not been in direct contact with gaseous or liquid process streams.		
	Agricultural		
(8)	Feed and grain milling, cleaning, conveying, drying and storage operations including grain storage silos, where such silos exhaust to an appropriate emissions control device, excluding grain terminal elevators with permanent storage capacities over 2.5 million U.S. bushels, and grain storage elevators with capacities above one million bushels.		
(9)	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.		
	Commercial - Food Service Industries		
(10)	Flour silos at bakeries, provided all such silos are exhausted through an appropriate emission control device.		
(11)	Emissions from flavorings added to a food product where such flavors are manually added to the product.		
	Commercial - Graphic Arts		
(12)	Screen printing inks/coatings or adhesives which are applied by a hand-held squeegee. A hand-held squeegee is one that is not propelled though the use of mechanical conveyance and is not an integral part of the screen printing process.		
(13)	Graphic arts processes at facilities located outside the New York City metropolitan area or the Orange County towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, or Woodbury whose facility-wide total emissions of volatile organic compounds from inks, coatings, adhesives, fountain solutions and cleaning solutions are less than three tons during any 12-month period.		



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Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location
(14)	Graphic label and/or box labeling operations where the inks are applied by stamping or rolling.		
(15)	Graphic arts processes which are specifically exempted from regulation under 6 NYCRR Part 234, with respect to emissions of volatile organic compounds which are not given an A rating as described in 6 NYCRR Part 212.		
	Commercial - Other		
(16)	Gasoline dispensing sites registered with the department pursuant to 6 NYCRR Part 612.		
(17)	Surface coating and related activities at facilities which use less than 25 gallons per month of total coating materials, or with actual volatile organic compound emissions of 1,000 pounds or less from coating materials in any 12-month period. Coating materials include all paints and paint components, other materials mixed with paints prior to application, and cleaning solvents, combined. This exemption is subject to the following:		
(17)	 (i) The facility is located outside of the New York City metropolitan area or the Orange County towns of Blooming Grove, Chester, Highlands, Monroe, Tuxedo, Warwick, or Woodbury; and 		
	(ii) All abrasive cleaning and surface coating operations are performed in an enclosed building where such operations are exhausted into appropriate emission control devices.		
(18)	Abrasive cleaning operations which exhaust to an appropriate emission control device.		
(19)	Ultraviolet curing operations.		
	Municipal/Public Health Related		
(20)	Landfill gas ventilating systems at landfills with design capacities less than 2.5 million megagrams (3.3 million tons) and 2.5 million cubic meters (2.75 million cubic yards), where the systems are vented directly to the atmosphere, and the ventilating system has been required by, and is operating under, the conditions of a valid 6 NYCRR Part 360 permit, or order on consent.		
	Storage Vessels		
(21)	Distillate fuel oil, residual fuel oil, and liquid asphalt storage tanks with storage capacities below 300,000 barrels.	5	Tanks 28, 29, 30, 33 and 64
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Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location		
(22)	Pressurized fixed roof tanks which are capable of maintaining a working pressure at all times to prevent emissions of volatile organic compounds to the outdoor atmosphere.				
(23)	External floating roof tanks which are of welded construction and are equipped with a metallic-type shoe primary seal and a secondary seal from the top of the shoe seal to the tank wall.				
(24)	External floating roof tanks which are used for the storage of a petroleum or volatile organic liquid with a true vapor pressure less than 4.0 psi (27.6 kPa), are of welded construction and are equipped with one of the following: (i) a metallic-type shoe seal:				
	(ii) a liquid-mounted foam seal; (iii) a liquid-mounted liquid-filled type seal: or				
	(iv) equivalent control equipment or device.				
(25)	Storage tanks, including petroleum liquid storage tanks as defined in 6 NYCRR Part 229, with capacities less than 10,000 gallons, except those subject to 6 NYCRR Part 229 or Part 233.				
(26)	Horizontal petroleum or volatile organic liquid storage tanks.	14	Additive Tks		
(27)	Storage silos storing solid materials, provided all such silos are exhausted through an appropriate emission control device. This exemption does not include raw material, clinker, or finished product storage silos at Portland cement plants.				
Industrial					
(28)	Processing equipment at existing sand and gravel and stone crushing plants which were installed or constructed before August 31, 1983, where water is used for operations such as wet conveying, separating, and washing. This exemption does not include processing equipment at existing sand and gravel and stone crushing plants where water is used for dust suppression.				
(29)(i)	Sand and gravel processing or crushed stone processing lines at a non-metallic mineral processing facility that are a permanent or fixed installation with a maximum rated processing capacity of 25 tons of minerals per hour or less.				



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Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location
(29)(ii)	Sand and gravel processing or crushed stone processing lines at a non-metallic mineral processing facility that are a portable emission source with a maximum rated processing capacity of 150 tons of minerals per hour or less.		
(29)(iii)	Sand and gravel processing or crushed stone processing lines at a non-metallic mineral processing facility that are used exclusively to screen minerals at a facility where no crushing or grinding takes place.		
(30)	Reserved.		
(31)	Surface coating operations which are specifically exempted from regulation under 6 NYCRR Part 228, with respect to emissions of volatile organic compounds which are not given an A rating pursuant to 6 NYCRR Part 212.		
(32)	Pharmaceutical tablet branding operations.		
(33)	Thermal packaging operations, including, but not limited to, therimage labeling, blister packing, shrink wrapping, shrink banding, and carton gluing.		
(34)	Powder coating operations.		
(35)	All tumblers used for the cleaning and/or deburring of metal products without abrasive blasting.		
(36)	Presses used exclusively for molding or extruding plastics except where halogenated carbon compounds or hydrocarbon solvents are used as foaming agents.		
(37)	Concrete batch plants where the cement weigh hopper and all bulk storage silos are exhausted through fabric filters, and the batch drop point is controlled by a shroud or other emission control device.		
(38)	Cement storage operations not located at Portland cement plants where materials are transported by screw or bucket conveyors.		
(39)(i)	Cold cleaning degreasers with an open surface area of 11 square feet or less and an internal volume of 93 gallons or less or, having an organic solvent loss of 3 gallons per day or less.		
39(ii)	Cold cleaning degreasers that use a solvent with a VOC content or five percent or less by weight, unless subject to the requirements of 40 CFR 63 Subpart T.		
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Rule Citation 201-3.2(c)	Description	Number of Activities	Building Location
(39)(iii)	Conveyorized degreasers with an air/vapor interface smaller than 22 square feet (2 square meters), unless subject to the requirements of 40 CFR 63 Subpart T.		
(39)(iv)	Open-top vapor degreasers with an open-top area smaller than 11 square feet (1 square meter), unless subject to the requirements of 40 CFR 63 Subpart T.		
	Miscellaneous		
(40)	Ventilating and exhaust systems for laboratory operations. Laboratory operations do not include processes having a primary purpose to produce commercial quantities of materials.	1	Testing Lab
(41)	Exhaust or ventilating systems for the melting of gold, silver, platinum and other precious metals.		
(42)	Exhaust systems for paint mixing, transfer, filling or sampling and/or paint storage rooms or cabinets, provided the paints stored within these locations are stored in closed containers when not in use.		
(43)	Exhaust systems for solvent transfer, filling or sampling, and/or solvent storage rooms provided the solvent stored within these locations are stored in containers when not in use.		
(44)	Research and development activities, including both stand-alone and activities within a major facility, until such time as the administrator completes a rule making to determine how the permitting program should be structured for these activities.		
(45)	The application of odor counteractants and/or neutralizers.		
(46)	Hydrogen fuel cells.		
(47)	Dry cleaning equipment that uses only water-based cleaning processes or those using liquid carbon dioxide.		
(48)	Manure spreading, handling and storage at farms and agricultural facilities.		



DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Applicable Compliance **Emission Unit** Method Used to Determine Compliance Requirement ID Date FACILITY **6 NYCRR** No emissions contravened any applicable ambient air In compliance 200.6 quality standard as of March 2020 FACILITY 6 NYCRR VCU Inspections, preventative maintenance records In compliance 200.7 as of March 2020 FACILITY **6 NYCRR** Wastes generated from air cleaning devices are managed In compliance 201-1.7 in accordance with NYSDEC rules regarding hazardous as of March 2020 and non hazardous wastes FACILITY 6 NYCRR Wastes generated from air cleaning devices were managed In compliance 201-1.8 in accordance with NYSDEC rules regarding hazardous as of March and non hazardous wastes 2020 FACILITY **6 NYCRR** Exempt and Trivial Source Inventory In compliance 201-3.2 (a) as of March 2020 FACILITY 6 NYCRR Exempt and Trivial Source Inventory In compliance 201-3.3 (a) as of March 2020 FACILITY **6 NYCRR Review definitions** In compliance Subpart 201-6 as of March 2020 6 NYCRR FACILITY Review permit emission unit definitions In compliance Subpart 201-6 as of March 2020 FACILITY 6 NYCRR **Review definitions** In compliance Subpart 201-6 as of March 2020 FACILITY 6 NYCRR Requested information was provided in a reasonable In compliance 201-6.5 (a) (4) timeframe as of March 2020

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Methods Used to Determine Compliance				
Emission Unit ID	Applicable Requirement	Method Used to Determine Compliance	Compliance Date	
FACILITY	6 NYCRR 201-6.5 (a) (7)	Accounting System	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (a) (8)	Global will allow access to the Department or authorized representative	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (c)	Any deviations are reported in semiannual reports.	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (c) (2)	Specific records kept include VCU Inspection Records / Annual and Semi Annual Reports/throughput records, Certificates of Analyses, Annual Emissions Statements, Bills of Lading	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (c) (3) (ii)	Semiannual Monitoring and Deviation Reports	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (d) (5)	Schedule of Compliance progress reports are submitted as required	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (e)	Annual Compliance Report and Certification	In compliance as of March 2020	
FACILITY	6 NYCRR 201-6.5 (f) (6)	Off permit notifications are submitted as required	In compliance as of March 2020	
FACILITY	6 NYCRR Subpart 201-7	Emissions Statement and 12 month rolling throughput spreadsheet	In compliance as of March 2020	
3-RACKM, RPM, CRD, BSM, VCUM1	6 NYCRR Subpart 201-7	VCU Performance Test Report	In compliance as of March 2020	

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DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Compliance Applicable **Emission Unit** Method Used to Determine Compliance Requirement ID Date 3-RACKM, 6 NYCRR VCU Performance Test Report In compliance RPM, CRD, Subpart 201-7 as of March BSM, VCUM2 2020 1-RACKT. 6 NYCRR VRU Performance Test Report In compliance RPT, VRUTK Subpart 201-7 as of March 2020 **6 NYCRR** 2-RACKR, VCU Performance Test Report In compliance RPR, VCURR Subpart 201-7 as of March 2020 1-RACKT. In compliance 6 NYCRR VRU Inspections, CEMS Data preventative maintenance RPT, as of March Subpart 201-7 records VRUTK 2020 2-RACKR. **6 NYCRR** VCU Inspections, preventative maintenance records, In compliance as of March RPR. Performance Test Reports Subpart 201-7 2020 VCURR 1-TANK1, 6 NYCRR Terminal Records / Product Information In compliance CR1 as of March Subpart 201-7 2020 2-RACKR. **6 NYCRR** In compliance Throughput records maintained at terminal as of March RPR Subpart 201-7 2020 3-RACKM, In compliance 6 NYCRR Throughput records maintained at terminal as of March CDM Subpart 201-7 2020 3-RACKM. **6 NYCRR** Throughput records maintained at terminal In compliance as of March BSM Subpart 201-7 2020 1-RACKT, 6 NYCRR Throughput records maintained at terminal In compliance 2-RACKR, Subpart 201-7 as of March 3-RACKM

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DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Compliance **Emission Unit** Applicable Method Used to Determine Compliance Requirement ID Date **6 NYCRR** Throughput records maintained at terminal 3-RACKM, In compliance Subpart 201-7 RPM as of March 2020 6 NYCRR Throughput records maintained at terminal In compliance 1-RACKT. Subpart 201-7 as of March RPT 2020 In compliance **6 NYCRR** FACILITY Notification of Performance Test are submitted as as of March 202-1.2 necessary 2828 In compliance FACILITY 6 NYCRR Performance Test Reports are submitted within 60 days of as of March 202-1.3 (a) a test 2020 In compliance **6 NYCRR** Annual Emission Statement FACILITY as of March 202-2.1 2020 In compliance FACILITY 6 NYCRR Emissions Statement and supporting documents are as of March 202-2.5 available for >5 years. 2020 In compliance 6 NYCRR FACILITY General ambient air quality monitoring procedures as of March 211.1 2020 In compliance 3-RACKM, 6 NYCRR Performance Test Report as of March RPM, VCUM1 212.4 (a) 2020 FACILITY **6 NYCRR** Performance Test In compliance 212.10 (c) (4) (i) as of March 2020 FACILITY **6 NYCRR** No open burning occurred at the Facility In compliance 215.2 as of March 2020

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Methods Used to Determine Compliance				
Emission Unit ID	Applicable Requirement	Method Used to Determine Compliance	Compliance Date	
FACILITY	6 NYCRR 225-1.2 (a) (2)	Certificates of Analysis / Product information (Maintained at Terminal)	In compliance as of March 2020	
FACILITY	6 NYCRR 225-1.6 (b)	Certificates of Analysis	In compliance as of March 2020	
FACILITY	6 NYCRR 225-1.6 (d)	Samples are taken according to ASTM or other applicable standards	In compliance as of March 2020	
FACILITY	6 NYCRR 225-3.3 (a)	Certificates of Analysis	In compliance as of March 2020	
FACILITY	6 NYCRR 229.1 (d) (2) (i)	Terminal Records, IFR Inspections, API Inspection Reports.	In compliance as of March 2020	
FACILITY	6 NYCRR 229.1 (d) (2) (iv)	VRU and VCU Performance Test Reports on File at the terminal	In compliance as of March 2020	
FACILITY	6 NYCRR 229.1 (d) (2) (v)	Terminal Records, IFR Inspections, API Inspection Reports.	In compliance as of March 2020	
FACILITY	6 NYCRR 229.3 (a)	Terminal Records, IFR Inspections, API Inspection Reports.	In compliance as of March 2020	
1-RACKT, RPT, 2-RACKR, RPR	6 NYCRR 229.3 (d)	VRU and VCU Performance Test Reports on File at the terminal	In compliance as of March 2020	
1-TANK1	6 NYCRR 229.3 (e) (1)	Terminal Records, IFR Inspections, API Inspection Reports.	In compliance as of March 2020	

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DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Applicable Compliance **Emission Unit** Method Used to Determine Compliance Requirement Date ID 3-RACKM, FGM 6 NYCRR **NSR Summary Report** In compliance RACKM, CDM 231-11.2 (c) as of March VCUM2, 2020 VCUM1 3-RACKM, FGM, 6 NYCRR NSR Summary Report In compliance RPM, CDM, 1-231-11.2 (c) TANK1. CR1. as of March TK031, TK114, 2020 TK115, TK032 FACILITY 40 CFR 60.4 **NSPS Notification Letters** In compliance as of March 2020 FACILITY 40 CFR 60.7 **NSPS** Notifications In compliance (a) as of March 2020 40 CFR 60.7 FACILITY **NSPS** Notifications In compliance (b) as of March 2020 40 CFR 60.7 Excess emissions reports are submitted when required 1-RACKT, 1- TANK1, In compliance RP1, BS1, CR1, (C) as of March TK115, TK032, 2020 TK039, TK031, TK114 40 CFR 60.7 FACILITY Excess emissions reports are submitted when required In compliance (d) as of March 2020 FACILITY 40 CFR 60.7 Excess emission reports are submitted when required In compliance as of March (e) 2020 FACILITY 40 CFR 60.7 Applicable Records are maintained at the terminal In compliance (f) as of March 2020 FACILITY 40 CFR 60.7 Administrator is copied on all applicable notices In compliance (g) as of March 2020

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Methods Used to Determine Compliance				
Emission Unit ID	Applicable Requirement	Method Used to Determine Compliance	Compliance Date	
FACILITY	40 CFR 60.8 (a)	Performance Test Report; NSPS Notifications	In compliance as of March 2020	
FACILITY	40 CFR 60.8 (b)	Performance Test Protocols	In compliance as of March 2020	
FACILITY	40 CFR 60.8 (c)	Performance Test Protocols submitted and reviewed by administrator	In compliance as of March 2020	
FACILITY	40 CFR 60.8 (d)	Performance Test Protocols	In compliance as of March 2020	
FACILITY	40 CFR 60.8 (e)	Terminal Operating Procedures	In compliance as of March 2020	
FACILITY	40 CFR 60.8 (f)	Test Protocols submitted and reviewed by administrator	In compliance as of March 2020	
FACILITY	40 CFR 60.9	Global complies with public notice requirements as directed by the Administrator.	In compliance as of March 2020	
FACILITY	40 CFR 60.11	Opacity Observations	In compliance as of March 2020	
FACILITY	40 CFR 60.11 (d)	Terminal operating procedures	In compliance as of March 2020	
FACILITY	40 CFR 60.12	Operation of the terminal is reviewed by the Terminal Manager and Operations Manager.	In compliance as of March 2020	

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Methods Used to Determine Compliance					
Emission Unit ID	Applicable Requirement	Method Used to Determine Compliance	Compliance Date		
FACILITY	40 CFR 60.13	Compliance reporting is completed semi-annually.	In compliance as of March 2020		
FACILITY	40 CFR 60.14	Compliance is reported semi-annually.	In compliance as of March 2020		
FACILITY	40 CFR 60.15	Reconstruction notices submitted when required	In compliance as of March 2020		
1-TANK1, RP1, TK114, TK115, TK039	40 CFR 60.113b (a)	Internal Floating Roof inspections,API Inspection Reports	In compliance as of March 2020		
1-TANK1, RP1, TK031, TK114, TK115, TK032, TK039	40 CFR 60.115b (a)	Internal Floating Roof inspection records. Notifications are submitted as required.	In compliance as of March 2020		
1-TANK1, RP1, TK031, TK114, TK115, TK032, TK039	40 CFR 60.116b	Terminal Records / Product Information	In compliance as of March 2020		
1-RACKT	40 CFR 60.502 (b)	VRU and VCU Performance Test Reports on File at the terminal	In compliance as of March 2020		
1-RACKT	40 CFR 60.502 (e)	The Terminal Automation System ensures that trucks loading at the facility have valid certificates	In compliance as of March 2020		
FACILITY	40 CFR 60.502 (f)	Tank Truck Certification Program	In compliance as of March 2020		
FACILITY	40 CFR 60.502 (g)	The Terminal Automation System prevents loading without being properly connected	In compliance as of March 2020		

Sheet <u>8</u> of <u>11</u>



DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Compliance Applicable **Emission Unit** Method Used to Determine Compliance Requirement ID Date 40 CFR 1-RACK1 PM Records In compliance 60.502 (i) as of March 2020 40 CFR FACILITY Terminal Records In compliance 63.11081 (a) as of March 2020 FACILITY 40 CFR Notice of Compliance Status In compliance 63.11083 (b) as of March 2020 1-TANK1. 40 CFR IFR inspection reports, API inspection reports. In compliance RP1 63.11087 as of March 2020 40 CFR VRU and VCU Performance Test reports on file at the 1-RACKT, In compliance **RPT**, 2-63.11088 terminal as of March RACKR, R2R 2020 Monthly Inspection Forms; List of equipment in gasoline 40 CFR In compliance 1-RACKT, FGT, 63.11089 service as of March 2- RACKR. 2020 FGR ,1-FUGTV 1-RACKT, 40 CFR Test Protocol submitted to Administrator In compliance RPT, 63.11092 (a) as of March 2-RACKR, 2020 RPR 40 CFR Notice of Compliance Status In compliance FACILITY 63.11092 (a) as of March (2) 2020 40 CFR Notice of Compliance Status FACILITY In compliance 63.11092 (a) as of March (3) 2020 1-RACKT, 40 CFR Continuous Emissions Monitoring Data In compliance 63.11092 (b) RPT, as of March (1) (i) ('B') ('1') 2-RACKR, 2020 RPR

Version 1.1 3/4/2015

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DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Applicable Compliance **Emission Unit** Method Used to Determine Compliance ID Requirement Date 1-RACKT, 40 CFR A CEMS is installed. Alternative monitoring forms when In compliance 63.11092 (b) RPT. CEMS is down. as of March (1) (i) ('B') ('2' 2-RACKR. 2020 RPR 40 CFR 2-RACKR, Preventative Maintenance, VCU Inspection and Monitoring In compliance 63.11092 (b) Plan, Daily Inspection Forms. RPR, as of March (1) (iii) VCURR 2020 1-RACKT, 40 CFR Terminal Automation system and backup files In compliance 63.11094 (b) FGT as of March 2020 40 CFR 1-RACK1, Terminal Automation system and backup files In compliance FGT 63.11094 (c) as of March 2020 1-RACKT, 40 CFR List of Equipment in Gasoline Service, Monthly inspection In compliance FGT, 2-63.11094 (d) forms as of March RACKR, FGR, 2020 1-FUGTV 1-RACKT. 40 CFR Monthly Inspection Forms In compliance FGT, 2-63.11094 (e) as of March RACKR, FGR, 2020 1-FUGTV 1-RACKT, RPT, 40 CFR VCU Record-keeping and VRU CEMS Monitoring Data In compliance VRUTK, 2-63.11094 (f) as of March RACKR, RPR, 2020 VCURR 1-RACKT, FGT, 40 CFR Subpart BBBBBB Monitoring report In compliance RPT 2- RACKR, 63.11095 (a) as of March FGR, RPR, 1-2020 TANK1, RP1 1-RACKT, FGT 40 CFR If necessary, excess emissions reports are submitted with In compliance RPT, 2-RACKR, 63.11095 (b) the Subpart BBBBBB semiannual monitoring reports as of March FGR, RPR 2020 FACILITY 40 CFR Review table In compliance 63.11098 as of March 2020

Sheet _10 of _11



DEC ID 4 - 0 10 1 - 0 0 1 12 **Methods Used to Determine Compliance** Applicable Compliance **Emission Unit** Method Used to Determine Compliance ID Requirement Date 2-RACKR, 40 CFR Part PM Records In compliance RPR. 64 as of March VCURR 2020 40 CFR Part PM Records 1-RACKT. In compliance RPT. 64 as of March VRUTK 2020 1-RACKT, 40 CFR Part VRU Automation System and CEMS Unit In compliance RPT. 64 as of March VRUTK 2020 3-RACKM, 40 CFR Part Marine VCU Prestartup Checklist In compliance CDM, 64 as of March VCUM2. 2020 VCUM1 1-RACKT, 40 CFR Part VCU PM records In compliance FGT, 2-64 as of March RACKR, FGR, 2020 1-FUGTV FACILITY 40 CFR Part Fuels are exempt from program and no other chemicals are In compliance utilized which exceed threshold 68 as of March 2020 FACILITY 40 CFR Part Only Certified Contractors are used to work on refrigerant In compliance 82, Subpart F systems as of March 2020 Review list of contaminants FACILITY ECL 19-0301 In compliance as of March 2020 ECL 19-0301 FACILITY Terminal Records / Product Information In compliance (3) (b) as of March 2020 **6 NYCRR** FACILITY Facility has not requested an affirmative defense during the In compliance 201-1.4 permit period. as of March 2020

Sheet <u>11</u> of <u>11</u>

Emission Unit Matrix

Emission Unit ID	Emission Unit Description	Dresses ID	Process Description	SCC Code	Courses ID	Source Description	Control ID	Control Description	Emission Doint ID
		Process ID		sectode	Source ID	Source Description	CONTOURD	Control Description	
1-TANK1	This emission unit represents	RP1	Refined product storage	4-03-010-99	TK031	4,200,000 gallon tank	TK31C	Internal Floating Roof	00T31
	storage tanks at the facility.		tanks used for storage and		TK032	4,200,000 gallon tank	TK32C	Internal Floating Roof	00T32
			distribution at terminal.		тк039	4.200.000 gallon tank	TK39C	Internal Floating Roof	00T39
					TK114	3 887 898 gallon tank	T11/C	Internal Floating Roof	0T114
					TK114		71140		01114
					TKIIS	5,851,902 gallon tank	11150	Internal Floating Roof	01115
					TK117	3,028,032 gallon tank	T117C	Internal Floating Roof	0T117
					TK118	2,426,550 gallon tank	T118C	Internal Floating Roof	0T118
					TK119	1 619 268 gallon tank	T119C	Internal Floating Boof	0T119
					TK110		T120C	Internal Floating Roof	01115
					TKIZU	1,640,940 gallon tank	1120C	Internal Floating Roof	01120
					TK121	5,370,204 gallon tank	T121C	Internal Floating Roof	0T121
					1	1			
		DC1	Blondstock storage tanks used	1	TV114	2 997 909 gallon tank	T114C	Internal Floating Roof	07114
		531	Bienustock storage tanks used		1K114		1114C		01114
			for storage and distribution at		TK115	5,851,902 gallon tank	1115C	Internal Floating Roof	01115
			terminal.		TK117	3,028,032 gallon tank	T117C	Internal Floating Roof	0T117
					TK119	1,619,268 gallon tank	T119C	Internal Floating Roof	0T119
					тк121	5 370 204 gallon tank	T121C	Internal Floating Roof	0T121
						-,			• · ·
		694		4 00 040 00	-	1 200 000 1/ 1			00704
1		CR1	Crude Oil storage tanks used for	4-03-010-99	TK031	4,200,000 gallon tank	TK31C	Internal Floating Root	U0T31
			storage and distribution at terminal.		TK032	4,200,000 gallon tank	TK32C	Internal Floating Roof	00T32
					TK039	4,200,000 gallon tank	T039C	Internal Floating Roof	00T39
					TK114	3 887 808 gallon tank	T114C	Internal Floating Roof	0T114
	1				18114		11140		01114
					TK115	5,851,902 gallon tank	T115C	Internal Floating Roof	0T115
					TK117	3,028,032 gallon tank	T117C	Internal Floating Roof	0T117
					TK118	2 426 550 gallon tank	T118C	Internal Floating Roof	0T118
					TK110	1 610 368 gallen tank	T110C	Internal Floating Roof	07110
					11119	1,019,208 galloll tallk	11190	Internal Floating Roof	01119
					TK120	1,640,940 gallon tank	T120C	Internal Floating Roof	0T120
					TK121	5,370,204 gallon tank	T121C	Internal Floating Roof	0T121
								_	
							1		1
						1	1	L	1
		PCW	Wastewater tank contaminated	NOT NEEDED	TK130	1,512,714 gal wastewater tank	T130C	Internal Floating Roof	0T130
			with gasoline/distillate.						
	Truck loading rack	DDT	Emissions from VBLL at truck rack	4 04 001 52	PACKT	Truck Pack		Vapor Bocovory Upit	OTPK1
1-RACKI	Truck loading fack	RPT		4-04-001-55	RACKI	TTUCK RACK	VRUIN	vapor Recovery Offic	UIRKI
			while loading refined products						
		FGT	Fugitive emissions from loading trucks	4-04-001-51	RACKT	Truck Rack	VACTK	Vac Assist Vapor Reduction System	0TRK2
		-	at Back 1				-		-
2-RACKR	Rail loading rack	RPR	Emissions from VCU at rail rack	4-04-001-53	RACKR	Rail Rack	VCURR	Vapor Combustion Unit	ORRK1
			while loading refined products						
		FGR	Fugitive emissions from loading railcars	4-04-001-51	RACKR	Rail Rack	VACRR	Vac Assist Vapor Reduction System	ORRK2
			at Rack 2						
1									
3-BACKM	Marine loading dock	RPM	Emissions from VCII at marine dock	4-06-002-98	BACKM	Marine Dock	VCUM1	Vapor Combustion Unit 1 for PD2/RS2/CD2	0MDR1
S RACKIN		IAF IVI	while leading actional	+ 00 002-30	INCOMP.	HIGHTE DOCK	VCUNT	Vagas Combustion Unit 1 Tol KF5/B55/CD5	
			while loading refined products				VCUM2	vapor Compustion Unit 2 for RP3/BS3/CD3	UNDR2
1	1								
	1								
		DCAA	Emissions from VCU at mark	4 06 002 08	DACKAS	Marina Dack	VCUNT	Vanar Combustica Unit 4 for 200 /000 /000	014001
		RZINI	Emissions from VCU at marine dock	4-06-002-98	RACKM	Iviarine Dock	VCUM1	vapor Compustion Unit 1 for RP3/BS3/CD3	UNDRI
			while loading blendstock				VCUM2	Vapor Combustion Unit 2 for RP3/BS3/CD3	0MDR2
	1								
		CDM	Emissions from Rack 3 while	4-06-002-98	RACKM	Marine Dock	VCUM1	Vapor Combustion Unit 1 for RP3/RS3/CD3	0MDR1
			loading crude oil				VCUMO	Vapor Compustion Unit 2 for DD2/DC2/CC2	OMDRO
1			loading crude oli				VCUM2	vapor Compustion Unit 2 for RP3/BS3/CD3	UNDR2
1	1								
1	1								
	1								
1									
1			- ··· · ·						
1	1	FGM	Fugitive emissions from loading marine	4-04-001-51	RACKM	Marine Dock	VACMD	Vac Assist Vapor Reduction System	OMDR3
	1		vessels at Rack 3						
1-FUGTV	Facility wide fugitive emissions	FUG	Facility wide fugitive emissions		FUGTV	Fugitive emissions	1		FPEUG
1.0014	active while rugitive emissions	.00			10010	abrive emissions			21100
1			trom pumps, valves, flanges &						
1	1		misc appurtances						
	1								
	1								
		4				-			
	petroleum/water mixture reclamation		Emissions from Air Strinner treated through						
	process		estalutic ovidation	Net peoded	014/04/202	Air Stringer	CATOY	Catalutia avidatic -	00214/14/
T-LANINIKL	In ocess	r' vv IVI	ταταιγτις υπισαιύτι	NOL HEEGEG	PVVIVIKP	All Stripper	LAIUX	ταιαίγεις οχιαστίση	JUZ WWW

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PERMIT Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Permit ID:	Air Title V Facility 4-0101-00112/00029 Mod 0 Effective Date: 03/03/2011 Expiration Date: 03/02/2016				
	Mod 1 Effective Date: 08/10/2011 Expiration Date: 03/02/2016				
	Mod 2 Effective Date: 08/29/2011 Expiration Date: 03/02/2016				
	Mod 3 Effective Date: 11/02/2011 Expiration Date: 03/02/2016				
	Mod 4 Effective Date: 11/07/2012 Expiration Date: 03/02/2016				
Permit Issued	To:GLOBAL COMPANIES LLC 800 SOUTH STREET WALTHAM, MA 02453				
Facility:	GLOBAL COMPANIES LLC - ALBANY TERMINAL 50 CHURCH ST - PORT OF ALBANY ALBANY, NY 12202				

Contact: DARRELL BOEHLKE CHARLES FURMAN GLOBAL CO ALBANY TERMINAL 50 CHURCH ST ALBANY, NY 12202 (518) 436-6570

Description:

This modification authorizes the storage of crude oil and loading into barges at the facility's marine loading terminal. A new Vapor Combustion Unit (VCU) will be utilized to control air emissions. The facility increased the overall emissions profile with this modification.



By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator:

ANGELO A MARCUCCIO NYSDEC 1130 N WESTCOTT RD SCHENECTADY, NY 12306-2014

Authorized Signature:

Date: ____ / ____ / ____



Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



LIST OF CONDITIONS

DEC GENERAL CONDITIONS

General Provisions Facility Inspection by the Department Relationship of this Permit to Other Department Orders and Determinations Applications for permit renewals, modifications and transfers Permit modifications, suspensions or revocations by the Department Permit modifications, suspensions or revocations by the Department Facility Level Submission of application for permit modification or renewal-REGION 4 HEADQUARTERS



DEC GENERAL CONDITIONS **** General Provisions **** For the purpose of your Title V permit, the following section contains state-only enforceable terms and conditions. GENERAL CONDITIONS - Apply to ALL Authorized Permits.

Condition 1: Facility Inspection by the Department Applicable State Requirement: ECL 19-0305

Item 1.1:

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 2: Relationship of this Permit to Other Department Orders and Determinations Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Condition 3: Applications for permit renewals, modifications and transfers Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 3.2:

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for State Facility Permits.

Item 3.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

DEC Permit Conditions Renewal 2/Mod 4/FINAL



Condition 1-1: Permit modifications, suspensions or revocations by the Department Applicable State Requirement: 6 NYCRR 621.13

Item 1-1.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

a) materially false or inaccurate statements in the permit application or supporting papers;b) failure by the permittee to comply with any terms or conditions of the permit;

c) exceeding the scope of the project as described in the permit application;

d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit; e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

Condition 4: Permit modifications, suspensions or revocations by the Department Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:

The Department reserves the right to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

a) materially false or inaccurate statements in the permit application or supporting papers;

b) failure by the permittee to comply with any terms or conditions of the permit;

c) exceeding the scope of the project as described in the permit application;

d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit; e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

**** Facility Level ****

Condition 5: Submission of application for permit modification or renewal-REGION 4 HEADQUARTERS Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator Region 4 Headquarters Division of Environmental Permits 1130 North Westcott Rd. Schenectady, NY 12306-2014 (518) 357-2069

> DEC Permit Conditions Renewal 2/Mod 4/FINAL



Permit Under the Environmental Conservation Law (ECL)

ARTICLE 19: AIR POLLUTION CONTROL - TITLE V PERMIT

IDENTIFICATION INFORMATION

Permit Issued To:GLOBAL COMPANIES LLC 800 SOUTH STREET WALTHAM, MA 02453

Facility: GLOBAL COMPANIES LLC - ALBANY TERMINAL 50 CHURCH ST - PORT OF ALBANY ALBANY, NY 12202

Authorized Activity By Standard Industrial Classification Code: 5171 - PETROLEUM BULK STATIONS & TERMINALS

Mod 0 Permit Effective Date: 03/03/2011	Permit Expiration Date: 03/02/2016
Mod 1 Permit Effective Date: 08/10/2011	Permit Expiration Date: 03/02/2016
Mod 2 Permit Effective Date: 08/29/2011	Permit Expiration Date: 03/02/2016
Mod 3 Permit Effective Date: 11/02/2011	Permit Expiration Date: 03/02/2016
Mod 4 Permit Effective Date: 11/07/2012	Permit Expiration Date: 03/02/2016



LIST OF CONDITIONS

FEDERALLY ENFORCEABLE CONDITIONS Facility Level

- 1 6 NYCRR 200.6: Acceptable Ambient Air Quality
- 2 6 NYCRR 201-6.5 (a) (7): Fees
- 3 6 NYCRR 201-6.5 (c): Recordkeeping and reporting of compliance monitoring
- 4 6 NYCRR 201-6.5 (c) (2): Monitoring, Related Recordkeeping, and Reporting Requirements.
- 5 6 NYCRR 201-6.5 (c) (3) (ii): Compliance Certification
- 2-1 6 NYCRR 201-6.5 (e): Compliance Certification
- 6 6 NYCRR 202-2.1: Compliance Certification
- 7 6 NYCRR 202-2.5: Recordkeeping requirements
- 8 6 NYCRR 215.2: Open Fires Prohibitions
- 9 6 NYCRR 200.7: Maintenance of Equipment
- 10 6 NYCRR 201-1.7: Recycling and Salvage
- 11 6 NYCRR 201-1.8: Prohibition of Reintroduction of Collected Contaminants to the air
- 12 6 NYCRR 201-3.2 (a): Exempt Sources Proof of Eligibility
- 13 6 NYCRR 201-3.3 (a): Trivial Sources Proof of Eligibility
- 14 6 NYCRR 201-6.5 (a) (4): Standard Requirement Provide Information
- 15 6 NYCRR 201-6.5 (a) (8): General Condition Right to Inspect
- 16 6 NYCRR 201-6.5 (d) (5): Standard Requirements Progress Reports
- 17 6 NYCRR 201-6.5 (f) (6): Off Permit Changes
- 18 6 NYCRR 202-1.1: Required Emissions Tests
- 20 40 CFR Part 68: Accidental release provisions.
- 21 40CFR 82, Subpart F: Recycling and Emissions Reduction
- 22 6 NYCRR Subpart 201-6: Emission Unit Definition
- 24 6 NYCRR Subpart 201-7: Facility Permissible Emissions
- *3-1 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-1 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-2 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *1-3 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *2-3 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-3 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *1-4 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-4 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-5 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-6 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *1-7 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- *4-7 6 NYCRR Subpart 201-7: Capping Monitoring Condition
- 31 6 NYCRR 202-1.2: Notification
- 32 6 NYCRR 202-1.3 (a): Acceptable procedures
- 1-8 6 NYCRR 211.1: Air pollution prohibited
- 33 6 NYCRR 212.2: Compliance Certification
- 34-6 NYCRR 212.4 (a): Emissions from new emission sources and/or modifications
- 35 6 NYCRR 212.4 (a): Compliance Certification
- 4-8 6 NYCRR 212.10 (c) (4) (i): Compliance Certification



36 6 NYCRR 225-1.2 (a) (2): Compliance Certification 37 6 NYCRR 225-1.8 (b): Compliance Certification 38 6 NYCRR 225-1.8 (d): Sampling, compositing, and analysis of fuel samples 39 6 NYCRR 225-3.3 (a): Compliance Certification 40 6 NYCRR 229.1 (d) (2) (i): Petroleum fixed roof tanks - a 41 6 NYCRR 229.1 (d) (2) (iv): Gasoline terminals - a 42 6 NYCRR 229.1 (d) (2) (v): VOL storage tanks greater than 20,000 gallons - a 43 6 NYCRR 229.3 (a): Internal floating roofs required in fixed roof tanks storing petroleum products 44 6 NYCRR 229.3 (d): Compliance Certification 45 6 NYCRR 229.3 (e) (1): VOL fixed roof storage tank requirements 4-9 6 NYCRR 231-11.2 (c): Compliance Certification 4-10 6 NYCRR 231-11.2 (c): Compliance Certification 46 40CFR 60.4, NSPS Subpart A: EPA Region 2 address. 47 40CFR 60.7(a), NSPS Subpart A: Modification Notification 48 40CFR 60.7(b), NSPS Subpart A: Recordkeeping requirements. 49 40CFR 60.7(c), NSPS Subpart A: Compliance Certification 50 40CFR 60.7(d), NSPS Subpart A: Excess emissions report. 51 40CFR 60.7(e), NSPS Subpart A: Monitoring frequency waiver. 52 40CFR 60.7(f), NSPS Subpart A: Facility files for subject sources. 53 40CFR 60.7(g), NSPS Subpart A: Notification Similar to State or Local Agency 54 40CFR 60.8(a), NSPS Subpart A: Performance testing timeline. 55 40CFR 60.8(b), NSPS Subpart A: Performance test methods. 56 40CFR 60.8(c), NSPS Subpart A: Required performance test information. 57 40CFR 60.8(d), NSPS Subpart A: Prior notice. 58 40CFR 60.8(e), NSPS Subpart A: Performance testing facilities. 59 40CFR 60.8(f), NSPS Subpart A: Number of required tests. 60 40CFR 60.9, NSPS Subpart A: Availability of information. 61 40CFR 60.11, NSPS Subpart A: Opacity standard compliance testing. 62 40CFR 60.11(d), NSPS Subpart A: Compliance with Standards and Maintenance Requirements 63 40CFR 60.12, NSPS Subpart A: Circumvention. 64 40CFR 60.13, NSPS Subpart A: Monitoring requirements. 65 40CFR 60.14, NSPS Subpart A: Modifications. 66 40CFR 60.15, NSPS Subpart A: Reconstruction 67 40CFR 60.113b(a), NSPS Subpart Kb: Compliance Certification 68 40CFR 60.115b(a), NSPS Subpart Kb: Compliance Certification 69 40CFR 60.116b, NSPS Subpart Kb: Compliance Certification 70 40CFR 60.502(b), NSPS Subpart XX: Compliance Certification 71 40CFR 60.502(e), NSPS Subpart XX: Compliance Certification 72 40CFR 60.502(f), NSPS Subpart XX: Truck loading compatibility 73 40CFR 60.502(g), NSPS Subpart XX: Vapor collection connection required 74 40CFR 60.502(i), NSPS Subpart XX: Compliance Certification 75 40CFR 63.11081(a), Subpart BBBBBB: Definition of an affected source 76 40CFR 63.11083(b), Subpart BBBBBB: Compliance date for an existing source 77 40CFR 63.11087, Subpart BBBBBB: Compliance Certification 78 40CFR 63.11088, Subpart BBBBBB: Compliance Certification 79 40CFR 63.11089, Subpart BBBBBB: Compliance Certification 80 40CFR 63.11092(a), Subpart BBBBBB: Compliance Certification

Air Pollution Control Permit Conditions Page 3 F



- 81 40CFR 63.11092(a)(2), Subpart BBBBBB: Waiver of new performance test requirement by complying with state rule
- 82 40CFR 63.11092(a)(3), Subpart BBBBBB: Waiver of new testing requirement due to previous test conducted within 5 prior year period
- 83 40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB: Compliance Certification
- 84 40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB: Compliance Certification
- 85 40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB: Compliance Certification
- 86 40CFR 63.11092(b)(1)(i)('B')('2'), NESHAP Subpart BBBBBB: Compliance Certification
- 87 40CFR 63.11092(b)(1)(iii), Subpart BBBBBB: Compliance Certification
- 88 40CFR 63.11094(b), Subpart BBBBBB: Compliance Certification
- 89 40CFR 63.11094(c), Subpart BBBBBB: Compliance Certification
- 90 40CFR 63.11094(d), Subpart BBBBBB: Compliance Certification
- 91 40CFR 63.11094(e), Subpart BBBBBB: Compliance Certification
- 92 40CFR 63.11094(f), Subpart BBBBBB: Compliance Certification
- 93 40CFR 63.11095(a), Subpart BBBBBB: Compliance Certification
- 94 40CFR 63.11095(b), Subpart BBBBBB: Compliance Certification
- 95 40CFR 63.11098, Subpart BBBBBB: Applicability of MACT General Provisions
- 4-11 40 CFR Part 64: Compliance Certification
- 4-12 40 CFR Part 64: Compliance Certification
- 96 40 CFR Part 64: Compliance Certification
- 101 40 CFR Part 64: Compliance Certification
- 102 40 CFR Part 64: Compliance Certification
- 103 40 CFR Part 64: Compliance Certification
- 105 40 CFR Part 64: Compliance Certification

Emission Unit Level

- 106 6 NYCRR Subpart 201-6: Emission Point Definition By Emission Unit
- 107 6 NYCRR Subpart 201-6: Process Definition By Emission Unit

STATE ONLY ENFORCEABLE CONDITIONS Facility Level

- 108 ECL 19-0301: Contaminant List
- 109 ECL 19-0301 (3) (b): Compliance Demonstration
- 110 6 NYCRR 201-1.4: Unavoidable noncompliance and violations
- 1-9 6 NYCRR 211.2: Visible Emissions Limited

NOTE: * preceding the condition number indicates capping.



FEDERALLY ENFORCEABLE CONDITIONS **** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS The items listed below are not subject to the annual compliance certification requirements under Title V. Permittees may also have other obligations under regulations of general applicability.

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency constitutes an affirmative defense to an action brought for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner

and/or

operator can identify the cause(s) of the emergency;

(2) The equipment at the permitted facility causing the emergency was at the time being properly operated;

(3) During the period of the emergency the facility owner and/or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner and/or operator notified the Department within two working days after the event occurred. This

within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner and/or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item B:Public Access to Recordkeeping for Title V Facilities - 6
NYCRR 201-1.10 (b)The Department will make available to the public any
permit application, compliance plan, permit, and
monitoring and compliance certification report pursuant to
Section 503(e) of the Act, except for information entitled
to confidential treatment pursuant to 6 NYCRR Part 616 -
Public Access to records and Section 114(c) of the Act.



Permit ID: 4-0101-00112/00029

Item C: Timely Application for the Renewal of Title V Permits - 6 NYCRR 201-6.3 (a) (4) Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Item D: Certification by a Responsible Official - 6 NYCRR 201-6.3 (d)(12)

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Item E: **Requirement to Comply With All Conditions - 6 NYCRR** 201-6.5 (a) (2)

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item F: Permit Revocation, Modification, Reopening, Reissuance or **Termination. and Associated Information Submission Requirements - 6 NYCRR 201-6.5 (a) (3)** This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Item G: **Cessation or Reduction of Permitted Activity Not a** Defense - 6 NYCRR 201-6.5 (a) (5) It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

Item H: Property Rights - 6 NYCRR 201-6.5 (a) (6)

This permit does not convey any property rights of any sort or any exclusive privilege.



Item I: Severability - 6 NYCRR 201-6.5 (a) (9)

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

Item J: Permit Shield - 6 NYCRR 201-6.5 (g)

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;

ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;

iii. The applicable requirements of Title IV of the Act;

iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item K: Reopening for Cause - 6 NYCRR 201-6.5 (i)

This Title V permit shall be reopened and revised under any of the following circumstances:

i. If additional applicable requirements under the Act become applicable where this permit's remaining term is



three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.

ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.

iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York



(NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item M: Federally Enforceable Requirements - 40 CFR 70.6 (b) All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT TO ANNUAL CERTIFICATIONS AT ALL TIMES

The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements at all times.

Condition 1: Acceptable Ambient Air Quality Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 200.6

Item 1.1:

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Condition 2: Fees Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (7)

Item 2.1:

The owner and/or operator of a stationary source shall pay fees to the Department consistent with the fee schedule authorized by ECL 72-0303.

Condition 3: Recordkeeping and reporting of compliance monitoring Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c)

Item 3.1:



The following information must be included in any required compliance monitoring records and reports:

(i) The date, place, and time of sampling or measurements;

(ii) The date(s) analyses were performed;

(iii)The company or entity that performed the analyses;

(iv) The analytical techniques or methods used including quality assurance and quality control procedures if required;

(v) The results of such analyses including quality assurance data where required; and

(vi) The operating conditions as existing at the time of sampling or measurement.

Any deviation from permit requirements must be clearly identified in all records and reports. Reports must be certified by a responsible official, consistent with Section 201-6.3 of this Part 201.

Condition 4: Monitoring, Related Recordkeeping, and Reporting Requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c) (2)

Item 4.1:

Compliance monitoring and recordkeeping shall be conducted according to the terms and conditions contained in this permit and shall follow all quality assurance requirements found in applicable regulations. Records of all monitoring data and support information must be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

Condition 5: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c) (3) (ii)

Item 5.1:

The Compliance Certification activity will be performed for the Facility.

Item 5.2: Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

To meet the requirements of this facility permit with respect to reporting, the permittee must:

Submit reports of any required monitoring at a minimum



frequency of every 6 months, based on a calendar year reporting schedule. These reports shall be submitted to the Department within 30 days after the end of a reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the responsible official for this facility.

Notify the Department and report permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations shall be submitted to the permitting authority based on the following schedule:

(1) For emissions of a hazardous air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.

(2) For emissions of any regulated air pollutant, excluding those listed in paragraph (1) of this section, that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.

(3) For all other deviations from permit requirements, the report shall be contained in the 6 month monitoring report required above.

(4) This permit may contain a more stringent reporting requirement than required by paragraphs (1), (2) or (3) above. If more stringent reporting requirements have been placed in this permit or exist in applicable requirements that apply to this facility, the more stringent reporting requirement shall apply.

If above paragraphs (1) or (2) are met, the source must notify the permitting authority by telephone during normal business hours at the Regional Office of jurisdiction for this permit, attention Regional Air Pollution Control Engineer (RAPCE) according to the timetable listed in paragraphs (1) and (2) of this section. For deviations and incidences that must be reported outside of normal business hours, on weekends, or holidays, the DEC Spill Hotline phone number at 1-800-457-7362 shall be used. A



written notice, certified by a responsible official consistent with 6 NYCRR Part 201-6.3(d)(12), must be submitted within 10 working days of an occurrence for deviations reported under (1) and (2). All deviations reported under paragraphs (1) and (2) of this section must also be identified in the 6 month monitoring report required above.

The provisions of 6 NYCRR 201-1.4 shall apply if the permittee seeks to have a violation excused unless otherwise limited by regulation. In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets. Notwithstanding any recordkeeping and reporting requirements in 6 NYCRR 201-1.4, reports of any deviations shall not be on a less frequent basis than the reporting periods described in paragraphs (1) and (4) above.

In the case of any condition contained in this permit with a reporting requirement of "Upon request by regulatory agency" the permittee shall include in the semiannual report, a statement for each such condition that the monitoring or recordkeeping was performed as required or requested and a listing of all instances of deviations from these requirements.

In the case of any emission testing performed during the previous six month reporting period, either due to a request by the Department, EPA, or a regulatory requirement, the permittee shall include in the semiannual report a summary of the testing results and shall indicate whether or not the Department or EPA has approved the results.

All semiannual reports shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Mailing addresses for the above referenced persons are contained in the monitoring condition for 6 NYCRR Part 201-6.5(e), contained elsewhere in this permit.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.



Subsequent reports are due every 6 calendar month(s).

Condition 2-1: Compliance Certification Effective between the dates of 08/29/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (e)

Item 2-1.1:

The Compliance Certification activity will be performed for the Facility.

Item 2-1.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Requirements for compliance certifications with terms and conditions contained in this facility permit include the following:

i. Compliance certifications shall contain:

- the identification of each term or condition of the permit that is the basis of the certification;

- the compliance status;

- whether compliance was continuous or intermittent;

- the method(s) used for determining the compliance status of the facility, currently and over the reporting period consistent with the monitoring and related recordkeeping and reporting requirements of this permit;

- such other facts as the Department may require to determine the compliance status of the facility as specified in any special permit terms or conditions; and

- such additional requirements as may be specified elsewhere in this permit related to compliance certification.

ii. The responsible official must include in the annual certification report all terms and conditions contained in this permit which are identified as being subject to certification, including emission limitations, standards, or work practices. That is, the provisions labeled herein as "Compliance Certification" are not the only provisions of this permit for which an annual certification is required.

iii. Compliance certifications shall be submitted annually. Certification reports are due 30 days after the anniversary date of four consecutive calendar quarters. The first report is due 30 days after the calendar quarter that occurs just prior to the permit anniversary date, unless another quarter has been acceptable by the Department.



iv. All compliance certifications shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Please send annual compliance certifications to Chief of the Stationary Source Compliance Section, the Region 2 EPA representative for the Administrator, at the following address:

USEPA Region 2 Air Compliance Branch 290 Broadway New York, NY 10007-1866

The address for the RAPCE is as follows:

NYSDEC 1130 North Westcott Road Schenectady, NY 12306-2014

The address for the BQA is as follows:

NYSDEC Bureau of Quality Assurance 625 Broadway Albany, NY 12233-3258

Monitoring Frequency: ANNUALLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due on the same day each year

Condition 6: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-2.1

Item 6.1:

The Compliance Certification activity will be performed for the Facility.

Item 6.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.



Monitoring Frequency: ANNUALLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due by April 15th for previous calendar year

Condition 7: Recordkeeping requirements Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-2.5

Item 7.1:

(a) The following records shall be maintained for at least five years:

(1) a copy of each emission statement submitted to the department; and

(2) records indicating how the information submitted in the emission statement was determined, including any calculations, data, measurements, and estimates used.

(b) These records shall be made available at the facility to the representatives of the department upon request during normal business hours.

Condition 8: Open Fires - Prohibitions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 215.2

Item 8.1:

Except as allowed by Title 6 NYCRR Section 215.3, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

Item 8.2

Per Section 215.3, burning in an open fire, provided it is not contrary to other law or regulation, will be allowed as follows:

(a) On-site burning in any town with a total population less than 20,000 of downed limbs and branches (including branches with attached leaves or needles) less than six inches in diameter and eight feet in length between May 15th and the following March 15th. For the purposes of this subdivision, the total population of a town shall include the population of any village or portion thereof located within the town. However, this subdivision shall not be construed to allow burning within any village.

(b) Barbecue grills, maple sugar arches and similar outdoor cooking devices when actually used for cooking or processing food.

(c) Small fires used for cooking and camp fires provided that only charcoal or untreated wood is used as fuel and the fire is not left unattended until extinguished.

(d) On-site burning of agricultural wastes as part of a valid agricultural operation on contiguous agricultural lands larger than five acres actively devoted to agricultural or horticultural use, provided such waste is actually grown or generated on those lands and such waste is capable of being fully burned within a 24-hour period.

(e) The use of liquid petroleum fueled smudge pots to prevent frost damage to crops.

(f) Ceremonial or celebratory bonfires where not otherwise prohibited by law, provided that only untreated wood or other agricultural products are used as fuel and the fire is not left unattended until extinguished.

(g) Small fires that are used to dispose of a flag or religious item, and small fires or other smoke producing process where not otherwise prohibited by law that are used in connection with a

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religious ceremony.

(h) Burning on an emergency basis of explosive or other dangerous or contraband materials by police or other public safety organization.

(i) Prescribed burns performed according to Part 194 of this Title.

(j) Fire training, including firefighting, fire rescue, and fire/arson investigation training, performed under applicable rules and guidelines of the New York State Department of State's Office of Fire Prevention and Control. For fire training performed on acquired structures, the structures must be emptied and stripped of any material that is toxic, hazardous or likely to emit toxic smoke (such as asbestos, asphalt shingles and vinyl siding or other vinyl products) prior to burning and must be at least 300 feet from other occupied structures. No more than one structure per lot or within a 300 foot radius (whichever is bigger) may be burned in a training exercise. (k) Individual open fires as approved by the Director of the Division of Air Resources as may be required in response to an outbreak of a plant or animal disease upon request by the commissioner of the Department of Agriculture and Markets, or for the destruction of invasive plant and insect species.

(1) Individual open fires that are otherwise authorized under the environmental conservation law, or by rule or regulation of the Department.

MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT TO ANNUAL CERTIFICATIONS ONLY IF APPLICABLE

The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements only if effectuated during the reporting period. [NOTE: The corresponding annual compliance certification for those conditions not effectuated during the reporting period shall be specified as "not applicable".]

Condition 9: Maintenance of Equipment Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 200.7

Item 9.1:

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 10: Recycling and Salvage Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-1.7

Item 10.1:

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of the ECL.



Condition 11: Prohibition of Reintroduction of Collected Contaminants to the air

Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-1.8

Item 11.1:

No person shall unnecessarily remove, handle or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

Condition 12: Exempt Sources - Proof of Eligibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-3.2 (a)

Item 12.1:

The owner and/or operator of an emission source or unit that is eligible to be exempt may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other State and Federal air pollution control requirements, regulations, or law.

Condition 13: Trivial Sources - Proof of Eligibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 201-3.3 (a)

Item 13.1:

The owner and/or operator of an emission source or unit that is listed as being trivial in this Part may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other State and Federal air pollution control requirements, regulations, or law.

Condition 14: Standard Requirement - Provide Information Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (4)

Item 14.1:

The owner and/or operator shall furnish to the department, within a reasonable time, any information that the department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the department copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee



may furnish such records directly to the administrator along with a claim of confidentiality, if the administrator initiated the request for information or otherwise has need of it.

Condition 15: General Condition - Right to Inspect Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (8)

Item 15.1:

The department or an authorized representative shall be allowed upon presentation of credentials and other documents as may be required by law to:

(i) enter upon the permittee's premises where a facility subject to the permitting requirements of this Subpart is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(ii) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(iii) inspect at reasonable times any emission sources, equipment (including monitoring and air pollution control equipment), practices, and operations regulated or required under the permit; and

(iv) sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

Condition 16: Standard Requirements - Progress Reports Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (d) (5)

Item 16.1:

Progress reports consistent with an applicable schedule of compliance are to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the department. Such progress reports shall contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

Condition 17: Off Permit Changes Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (f) (6)

Item 17.1:

No permit revision will be required for operating changes that contravene an express permit term, provided that such changes would not violate applicable requirements as defined under this Part or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting, or compliance certification permit terms and conditions. Such changes may be made

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without requiring a permit revision, if the changes are not modifications under any provision of title I of the act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions) provided that the facility provides the administrator and the department with written notification as required below in advance of the proposed changes within a minimum of seven days. The facility owner or operator, and the department shall attach each such notice to their copy of the relevant permit.

(i) For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(ii) The permit shield described in section 6 NYCRR 201-6.6 shall not apply to any change made pursuant to this paragraph.

Condition 18: Required Emissions Tests Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-1.1

Item 18.1:

For the purpose of ascertaining compliance or non-compliance with any air pollution control code, rule or regulation, the commissioner may require the person who owns such air contamination source to submit an acceptable report of measured emissions within a stated time.

Condition 20: Accidental release provisions. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 68

Item 20.1:

If a chemical is listed in Tables 1,2,3 or 4 of 40 CFR §68.130 is present in a process in quantities greater than the threshold quantity listed in Tables 1,2,3 or 4, the following requirements will apply:

a) The owner or operator shall comply with the provisions of 40 CFR Part 68 and;

b) The owner or operator shall submit at the time of permit issuance (if not previously submitted) one of the following, if such quantities are present:

1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR §68.10(a) or,

2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. Information should be submitted to:

Risk Management Plan Reporting Center C/O CSC 8400 Corporate Dr Carrollton, Md. 20785

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Condition 21: Recycling and Emissions Reduction Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 82, Subpart F

Item 21.1:

The permittee shall comply with all applicable provisions of 40 CFR Part 82.

The following conditions are subject to annual compliance certification requirements for Title V permits only.

Condition 22: Emission Unit Definition Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 22.1(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: <u>1-RACK1</u> <u>1-RACKT</u> Emission Unit Description:

Truck loading rack with three gasoline/ethanol bays and five distillate bays.

Truck Rack Minor Mod language replaced by language proposed in current application.

Item 22.2(From Mod 4):

 The facility is authorized to perform regulated processes under this permit for:
 Emission Unit: 1-RACK2 2-RACKR

 Emission Unit Description:
 Rail Rack Minor Mod language

 Railcar loading rack with two loading positions for
 replaced by language proposed in

 distillate and gasoline/ethanol.
 current application.

Item 22.3(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK3 3-RACKM Emission Unit Description: <u>This emission unit represents marine loading of products</u> at the dock. Marine loading dock.

Item 22.4(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK4 Emission Unit Description:

Rail spur for distillate loading.

Item 22.5(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-TANKS 1-TANK1 Emission Unit Description:

Add Emission Unit: 1-PWMRP: Description: Petroleum/water mixture reclamation process

Description: 1-FUGTV facility

Add Emission Unit:

wide fugitive emissions



This emission unit represents storage tanks at the facility.

Condition 24: Facility Permissible Emissions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 24.1:

The sum of emissions from the emission units specified in this permit shall not equal or exceed the following

Potential To Emit (PTE) rate for each regulated contaminant:

	CAS No: 0NY100-00-0	(From Mod 4)	PTE:	47,500 pounds			
per year	Name: HAP			205 300			
	CAS No: 0NY998-00-0	(From Mod 4)	PTE:	294,540 pounds			
per year	Name: VOC						

Condition 3-1: Capping Monitoring Condition Effective between the dates of 11/02/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 3-1.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 3-1.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 3-1.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 3-1.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time

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period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 3-1.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 3-1.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2 2-RACKR Process: R2E RPR

Emission Unit: 1-RACK2 Process: R2G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 3-1.7:

Compliance Certification shall include the following monitoring:

Capping: Yes

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Gasoline/Ethanol Refined Product throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Gasoline/ Ethanol Refined Product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current version of AP-42-emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 2 milligrams per liter, and a Marine Vapor Combustion Unit emission rate of 10 mg/l, it is a single sin

emission rate of 10 mg/l with negative pressure loading (vac assist) to eliminate fugitive emissions from loading rail cars.

Refined Product Gasoline/Ethanol throughputs shall be included in the annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE ETHANOL, DISTILLATE, BIODIESEL Upper Permit Limit: 150,000,000 gallons 300,000,000 gallons

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Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-1: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-1.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR 63 Subpart R

Item 4-1.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-1.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-1.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-1.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-1.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1	1-RACKT	
Process: RIE RPT, FGT		

Emission Unit: 2-RACKR Process: RPR, FGR

Emission Unit: 1-RACK1

Emission Unit: 3-RACKM Process: RPM, BSM, FGM

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Process: R1G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-1.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year, that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP.

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits for this specific cap were calculated using a Truck Vapor Recovery Unit emission rate of 10 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, a Marine Vapor Combustion Unit emission rate of 10 mg/l.

This throughput alottment is useable during times when the Vacuum Assist Vapor Reduction System is not operational.

Gasoline/Ethanol throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE Upper Permit Limit: 10,416,667 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-2: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-2.1:

Renewal 2/Mod 4/Active

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the

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Replace with capping condition for Refined Product Alternate Operating Scenarios (AOSs).



purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-2.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-2.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-2.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-2.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-2.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process:-R3E RPM

Emission Unit: 1-RACK3 Process: R3G

Regulated Contaminant(s): CAS No: 0NY998-00-0

CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-2.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description:


Refined Product

Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Refined Product Gasoline/Ethanol throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 2 form 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emission rate of 2 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values

Add condition for Blendstock loading - see

which were approved by Central Office on 6/28/2012., and with negative pressure loading (vac assist) to eliminate fugitive emissions from loading. Refined Product

Gasoline/Ethanol throughputs shall be included in the annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: OTHER LIQUID FUELS GASOLINE, ETHANOL, DISTILLATES, and BIODIESEL Upper Permit Limit: 450,000,000 gallons Monitoring Frequency: MONTHLY 900,000,000 gallons Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 1-3: Capping Monitoring Condition Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 1-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission



limits, terms, conditions and standards in this permit.

Item 1-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-3.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Emission Unit: 3-RACKM

Control Device: VCUM1

Process: BSM

Item 1-3.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3E RPM

Emission Unit: 1-RACK3 3-RACKM Process: R3G CDM

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP CAS No: 0NY998-00-0 VOC

Item 1-3.7:

Compliance Certification shall include the following monitoring:

Capping: Yes WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The emission rate of the Marine vapor combustion unit (VCUM1) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

Facility wide emissions were determined using the most current AP-42 emission factors and "TANKS" program. The



throughput limits were calculated using a The Marine Vapor Combustion Unit (VCUM1) will be operated at a maximum emission rate of 10 milligrams per liter.

This compliance test shall also demonstrate compliance with 6 NYCRR 212.4(a)

The vapor recovery unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date or 180 days after complete construction and operability of VCU, to determine if the vapor combustion unit achieves the 10 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 10 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 2-3: Capping Monitoring Condition Effective between the dates of 08/29/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 2-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6

Item 2-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 2-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 2-3.4:



On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time. period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 2-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 2-3.6:

The Compliance Certification activity will be performed for the facility; The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: CR1

Emission Source: TKØ31

Emission Unit: 1-TANKS Process: CR1

Emission Unit: 1-TANKS Process: CR1

Emission Unit: 1-TANKS Process: CR1

Regulated Contaminant(s):

Emission Source: TK114

Emission Source: TK115

Emission Source: TNK32

CAS No: 0NY998-00-0

1-RACKT, RPT 2-RACKR, RPR 3-RACKM, RPM & BSM

Applies to:

Replace this condition with (see form):

Facility-wide refined product throughput (gasoline, ethanol, blendstock, distillate, biodiesel) shall be limited to keep individual and total HAP emissions less than 9.5 tons/ yr and 23.75 tons/yr, respectively: that is, less than the applicability thresholds of 40 CFR 63, Subpart R. Refined product throughput shall also be limited to keep total VOC emissions below the applicability threshold of 6 NYCRR 231-6.

Upper Permit Limit: 1,928,300,000 gallons

Item 2-3.7:

Compliance Certification shall include the following monitoring

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC **OPERATIONS** Monitoring Description:

The following sources TK114, TK115, TK031, and TNK32 have the flexibility to be utilized as crude oil tanks. Although, at any one time only two of these sources can be utilized to store either gasoline or crude oil. The remaining two tanks will either be in distillate or ethanol service.

voc

The current emission profile or Potential To Emit (PTE) at the facility incorporporates the aforemetioned scenario. The facility has taken this cap to remain within this current emission profile.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: CRUDE OIL TANKS

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Parameter Monitored: CRUDE OIL Upper Permit Limit: 2 tanks Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-3: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 4-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-3.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-3.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK3 3-RACKM Control Device: Process: R3C RPM, BSM, CDM Emission Source: VCUM2

Regulated Contaminant(s):		Marine VCU I
CAS No: 0NY998-00-0	VOC	replaced by la
CAS No: 0NY100-00-0	HAP	current applic

Marine VCU Minor Mod language replaced by language proposed in current application.

Item 4-3.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: INTERMITTENT EMISSION TESTING WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description: The emission rate of the Marine Vapor Combustion Unit

> (VCUM2) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. This also absolves the facility from applicability from 6 NYCRR 231-6. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of

Facility wide emissions were determined using the most 6 NYCRR 231-6. eurrent AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Vapor Combustion Unit (VCU) emission rate of 2 3 milligrams per liter.

^ The Marine VCU (VCUM2) will be operated at a maximum

The vapor combustion unit shall be tested with report submitted to Department within 180 days after initial notification of startup to determine if the vapor eombustion unit achieves the 3 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: <u>3 milligrams per liter</u> 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period.

The initial report is due $\frac{1}{30/2013}$.

Subsequent reports are due every 12 calendar month(s).

Condition 1-4: Capping Monitoring Condition Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-4.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to

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the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 1-4.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 1-4.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-4.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-4.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 1-4.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

1-RACKTEmission Unit:1-RACK1Process:RHGRPTEmission Point:000010TRK1Emission Source:VRUTKControl Device:Regulated Contaminant(s):CAS No:0NY998-00-0VOC

HAP

Item 1-4.7:

Compliance Certification shall include the following monitoring:

CAS No: 0NY100-00-0

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description:

> The emission rate of the vapor recovery unit (VRUTK) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below

the applicability thresholds of 6 NYCRR 231-6.

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Facility wide emissions were determined using the most current AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Truck Vapor Recovery Unit (VRUTK) will be operated at a maximum emission rate of 2 milligrams per liter.

The vapor recovery unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date to determine if the vapor recovery unit achieves the 2 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due-1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-4: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-4.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 4-4.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-4.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-4.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This



certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-4.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-4.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 Process: R1D

Emission Unit: 1-RACK2 Process: R2D

Emission Unit: 1-RACK3 Process: R3D

Emission Unit: 1-RACK4 Process: R4D

Regulated Contaminant(s): CAS No: 0NY100-00-0

Item 4-4.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Distillate oil throughput shall be limited to keep individual and total HAP emissions less than 9.5 tons/yr and 23.75 tons/yr, respectively; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP.

HAP

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values

Replace this condition with (see form):

Applies to: 1-TANK1, RP1, CR1, BS1

Tank maintenance emissions will not exceed 22 tons on a rolling annual basis.

Emissions will be calculated using the latest version of AP-42.

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which were approved by Central Office on 6/28/2012.

Distillate oil throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: DISTILLATES - NUMBER 1 AND NUMBER 2 OIL Upper Permit Limit: 229,300,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-5: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-5.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-5.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-5.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-5.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-5.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of



the Act.

Item 4-5.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3C CDM Emission Unit: 3-RACKM Process: FGM

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-5.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Crude Oil throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Also to cap out of Volathe Organic Compunds (VOC) in regards to 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values which were approved by Central Office on 6/28/2012.

This crude throughput alottment is useable during times when the Marine Vapor Combustion Unit (Source ID: VCUM2) is not operational.

In the event that VCUM2 is operable throughout the annual year this alottment can be converted to 50,000,000 gallons controlled through Source ID: VCUM2 for operational flexibility purposes.

Crude Oil throughputs shall be included in the annual

Add Crude Oil Alternate Operating Scenarios condition.



report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: CRUDE OIL Upper Permit Limit: 20,000,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-6: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-6.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-6.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-6.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-6.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-6.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-6.6:

The Compliance Certification activity will be performed for the facility:



The Compliance Certification applies to:

1-RACKT Emission Unit: 1-RACK1 Process: RIE RPT

Emission Unit: 1-RACK1 Process: R1G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-6.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC **OPERATIONS** Monitoring Description: Refined Product Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. The refined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

> Emissions for this cap were calculated using the most current version of eurrent AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values which were approved by Central Office on 6/28/2012. with negative pressure loading (vac assist) to eliminate fugitive emissions from loading.

Refined product Gasoline/Ethanol throughputs shall be included in the

annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE, ETHANOL, DISTILLATE, BIODIESEL Upper Permit Limit: 639,583,333 gallons 879,300,000 Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

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Condition 1-7: Capping Monitoring Condition Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-7.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 1-7.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 1-7.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-7.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-7.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 1-7.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

2-RACKR	
Emission Unit: 1-RACK2	
Process: R2G RPR	

Emission Point: 00002 0RRK1 Emission Source: VCURR Control Device:

Regulated Contaminant(s): CAS No: 0NY998-00-0 VC CAS No: 0NY100-00-0 HA

VOC HAP

Item 1-7.7:

Compliance Certification shall include the following monitoring:



Capping: Yes Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description: The emission rate of the Rail vapor combustion unit (VCURR) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of Facility wide emissions were determined using the most 6 NYCRR 231-6 current AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Vapor Combustion Unit (VCU) emission rate of 2 10 milligrams per liter. VCURR will be operated at a maximum The vapor combustion unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date to determine if the vapor combustion unit achieves the 10 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1. Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 10 milligrams per liter 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING

DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-7: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-7.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-7.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.



Item 4-7.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-7.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-7.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-7.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3C CDM

Regulated Contaminant(s):	
CAS No: 0NY998-00-0	VOC
CAS No: 0NY100-00-0	HAP

Item 4-7.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description: Crude Oil throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Crude oil throughput shall also be limited to keep total VOC emissions

below the applicability thresholds of 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current version of AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of



10 2 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emission rate of 3 2 mg/l, An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values which were approved by Central Office on 6/28/2012. and with negative pressure loading (vac assist) to eliminate fugitive emissions from loading.

Crude Oil throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: CRUDE OIL Upper Permit Limit: 1,800,000,000 gallons 450,000,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 31: Notification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-1.2

Item 31.1:

A person who is required by the commissioner to submit a stack test report shall notify the commissioner, in writing, not less than 30 days prior to the test, of the time and date of the test. Such notification shall also include the acceptable procedures to be used to stack test including sampling and analytical procedures. Such person shall allow the commissioner, or his representative, free access to observe stack testing being conducted by such person.

Condition 32: Acceptable procedures Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 202-1.3 (a)

Item 32.1:

Emission testing, sampling and analytical determinations to ascertain compliance with this Subchapter shall be conducted in accordance with test methods acceptable to the commissioner. The Reference Methods contained in part 60, appendix A and part 61, appendix B of title 40 of the Code of Federal Regulations and all future technical revisions, additions or corrections made thereto shall be considered as acceptable test methods for those sources and contaminants for which they are expressly applicable, except where the commissioner has issued a specific method to be used instead of a Reference Method contained in these Federal regulations or where the commissioner determines that one or more alternate methods are also acceptable. The person who owns or operates an air contamination source shall submit the emission test report in triplicate, to the commissioner within 60 days after the completion of tests. In the event such source owner/operator can demonstrate to the commissioner such time is not sufficient, he may request in writing and be granted an extension. Where an opacity emission standard is applicable



to the source tested, the emission test report shall include the opacity observation.

Condition 1-8: Air pollution prohibited Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 211.1

Item 1-8.1:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.



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Emission Unit: 1RACK3 Process: R3E

Item 34.2:

No person shall cause or allow emissions that exceed the applicable permissible emission rate as determined from Table 2, Table 3, or Table 4 of 6 NYCRR Part 212 for the environmental rating issued by the commissioner.

Condition 35: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 212.4 (a) 212-3.

Item 35.1;

Item 35.2:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 Process: R3E

Emission Point: 00003 Emission Source: VCUML

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The Volatile Organic Compound (VOC) shall be reduced by a weight percent greater than or equal to 90% to ensure compliance with the emission standard in Table 2.

The emission rate was figured with a maximum loading rate of 168,000 gallons/hr while using the emission factor from AP-42 of 3.9 lbs/ 1000 gallons loaded equals an emission rate of 655 lbs/hour uncontrolled therefore the aforementioned emission standard applies. This condition also satisfies 6 NYCRR 212.10 RACT control of 81% by weight reduction.

Parameter Monitored. VOC

Lower Permit Limit: 90 percent by weight

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME Reporting Requirements: ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period.

The initial report is due 1/30/2012.

Subsequent reports are due every 12 calendar month(s).

Marine VCU Minor Mod language replaced by language proposed in current application.

FINAL



Condition 4-8: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 212.10 (c) (4) (i)

Item 4-8.1:

The Compliance Certification activity will be performed for the Facility.

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 4-8.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Volatile organic compound emission points which are equipped with a capture system and a control device with an overall removal efficiency of at least 81 percent are equipped with reasonably available control technology.

Manufacturer Name/Model Number: John Zink Vapor Combustion Unit Parameter Monitored: VOC Upper Permit Limit: 81 percent by weight Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 36: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 225-1.2 (a) (2)

Item 36.1:

The Compliance Certification activity will be performed for the Facility.

Item 36.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

No person shall use, purchase, sell, or offer for sale any distillate fuel oil which has a sulfur content greater than the limit presented below. A log of the sulfur



content in oil per delivery must be maintained on site for a minimum of five years after the date of the last entry.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: DISTILLATES - NUMBER 1 AND NUMBER 2 OIL Parameter Monitored: SULFUR CONTENT Upper Permit Limit: 1.5 percent by weight Monitoring Frequency: PER DELIVERY Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB) Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 37: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 225-1.8 (b)

Item 37.1:

The Compliance Certification activity will be performed for the Facility.

Item 37.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Any person who sells oil and/or coal must retain, for at least three years, records containing the following information:

i. fuel analyses and data on the quantities of all oil and coal received; and

ii. the names of all purchasers, fuel analyses and data on the quantities of all oil and coal sold.

Such fuel analyses must contain as a minimum:

i. data on the sulfur content, ash content, specific gravity and heating value of residual oil;

ii. data on the sulfur content, specific gravity and heating value of distillate oil; and

iii. data on the sulfur content, ash content and heating value of coal.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)



Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 38: Sampling, compositing, and analysis of fuel samples Effective between the dates of 03/03/2011 and 03/02/2016

1.6

Applicable Federal Requirement:6 NYCRR 225-1.8-(d)

Item 38.1:

All sampling, compositing, and analysis of fuel samples, taken to determine compliance with 6 NYCRR Part 225-1, must be done in accordance with methods acceptable to the commissioner.

Condition 39: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 225-3.3 (a)

Item 39.1:

The Compliance Certification activity will be performed for the Facility.

Item 39.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Any gasoline sold or supplied to a retailer or wholesale purchaser-consumer, shall have a Reid vapor pressure (RVP) no greater than 9.0 pounds per square inch (psi), during the period May 1st through September 15th of each year. Sampling and testing will be done according to a protocol approved by the Department.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: GASOLINE Parameter Monitored: REID VAPOR PRESSURE Upper Permit Limit: 9.0 pounds per square inch absolute Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB) Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 40: Petroleum fixed roof tanks - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.1 (d) (2) (i)

Add condition for Crude monthly RVP sampling - see form

New York State Department of Environmental Conservation Permit ID: 4-0101-00112/00029



Facility DEC ID: 4010100112

Item 40.1:

This Condition applies to: 1-TANK1 Emission Unit: 1TANKS Process: GA1 RPM

Item 40.2:

The tank must be retrofitted with an internal floating roof or equivalent control.

Condition 41: Gasoline terminals - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 229.1 (d) (2) (iv)

Item 41.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Emission Unit: 1RACK2 2-RACKR

Item 41.2:

The gasoline vapor collection and control systems must capture gasoline vapors during loading and unloading of gasoline transport vehicles and must condense, absorb, adsorb, or combust the gasoline vapors so emissions do not exceed 0.67pounds per 1000 gallons of gasoline loaded or unloaded. Any equivalent control system is acceptable.

Condition 42: VOL storage tanks greater than 20,000 gallons - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.1 (d) (2) (v)

Item 42.1:

This Condition applies to:

Emission Unit: 1TANKS 1-TANK Process: ET1

Item 42.2:

The storage tank must be equipped with an internal floating roof with a liquid-mounted primary seal and gasket fittings or equivalent control. Replacement of other than liquid-mounted seals is to be performed when the tank is cleaned and gas-freed for other purposes.

Condition 43: Internal floating roofs required in fixed roof tanks storing petroleum products Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 229.3 (a)





Item 43.1: This Condition applies to:

> Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 43.2:

No person may store petroleum liquid in a fixed roof tank subject to 6 NYCRR Part 229 unless:

1. the tank has been retrofitted with an internal floating roof or equivalent control; and

2. the vapor collection and vapor control systems are maintained and operated in such a way as to ensure the integrity and efficiency of the system.

Condition 44: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.3 (d)

Item 44.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Item 44.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The gasoline vapor collection and control systems must capture gasoline vapors during loading and unloading of gasoline transport vehicles and must condense, absorb, adsorb, or combust gasoline vapors so emissions do not exceed 0.67 pounds/1000 gallons.

Parameter Monitored: VOC Upper Permit Limit: 0.67 pounds per 1000 gallons Monitoring Frequency: PER DELIVERY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 45: VOL fixed roof storage tank requirements Effective between the dates of 03/03/2011 and 03/02/2016



Applicable Federal Requirement:6 NYCRR 229.3 (e) (1)

Item 45.1: This Condition applies to:

Emission Unit: 1TANKS 1-TANK1 Process: ET1 BS1, CR1

Item 45.2:

For a fixed roof storage tank storing volatile organic liquids, the tank must be equipped with an internal floating roof with a liquid-mounted primary seal and gasket fittings or equivalent control. Replacement of other than liquid-mounted seals is to be performed when the tank is cleaned and gas-free for other purposes.

Condition 4-9: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 231-11.2 (c)

Item 4-9.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

3-RACKM Emission Unit: 1-RACK3 Process: EC2_ECM	Emission Point:-00003
Process: PG5 TOM	Emission Source: RACKS
3-RACKM Emission Unit: 1-RACK3	Emission Point: 00003
Process: R3E RPM	Emission Source: RACK3
Emission Unit: 1-RACK3	Emission Point: 00003
Process: R3G	Emission Source: RACK3
1-TANK1 Emission Unit: 1-TANKS	
Process: CR1	Emission Source: TK031
1-TANK1 Emission Unit: 1-TANKS	
Process: CR1	Emission Source: TK114
1-TANK1 Emission Unit: 1-TANKS Process: CR1	Emission Source: TK115
1-T A NK 1	
Emission Unit: 1-TANKS	TK032
Process: CR1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114



Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1 RP1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1 RP1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1 RP1	TK039 Emission Source: TNK39

Item 4-9.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For a modification with a project emission potential which is less than 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, but equals or exceeds 50 percent of the applicable significant project threshold when emissions excluded in accordance with Clause 231-4.1(b)(40)(i)(c) of this Part are added, or for a modification with a project emission potential which equals or exceeds 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, the facility owner or operator must submit an application to modify the facility permit under the minor permit provisions of Subpart 201-6 of this Title or obtain a preconstruction permit under the provisions of Subpart 201-6 of this Title, and must:

(1) maintain the following information for a minimum of five years:

(i) a description of the modification.

(ii) an identification of each new or modified emission source(s) including the associated processes and emission unit.

(iii) the calculation of the project emission potential for each modified emission source(s) including supporting documentation. (iv) the date the modification commenced operation.

(2) monitor the emissions of each regulated NSR contaminant from the emission source(s) that will increase as a result of the modification, and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the change if the modification increases the design capacity of or potential to emit the regulated NSR contaminant at such emission source(s).

(3) submit a report to the department within 30 days after the end of each year during which records must be generated in accordance with Paragraph 231-11.2(c)(2) of this Part. The report must contain:

(i) the name, address, and telephone number of the major facility.

(ii) the annual emissions as calculated pursuant to Paragraph (c)(2) of this Section.

(iii) a comparison of actual annual emissions to the projected actual emissions and, if applicable, an explanation as to why the actual annual emissions exceeded the projected actual emissions.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-10: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 231-11.2 (c)

Item 4-10.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: <u>3-RACKM</u>

Emission Unit: 1-RACK3 Process: FG3 FGM 3-RACKM Emission Unit: 1-RACK3 Process: R3C CDM

Emission Source: RACK3

1-RACK3 CDM Em

Emission Source: VCUM2

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3-RACKM Emission Unit:-1-RACK3 Process: R3C CDM

VCUM1 Emission Source: VCUML

Item 4-10.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For a modification with a project emission potential which is less than 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, but equals or exceeds 50 percent of the applicable significant project threshold when emissions excluded in accordance with Clause 231-4.1(b)(40)(i)(c) of this Part are added, or for a modification with a project emission potential which equals or exceeds 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, the facility owner or operator must submit an application to modify the facility permit under the minor permit provisions of Subpart 201-6 of this Title or obtain a preconstruction permit under the provisions of Subpart 201-6 of this Title, and must:

(1) maintain the following information for a minimum of five years:

(i) a description of the modification.

(ii) an identification of each new or modified emission source(s) including the associated processes and emission unit.

(iii) the calculation of the project emission potential for each modified emission source(s) including supporting documentation.

(iv) the date the modification commenced operation.

(2) monitor the emissions of each regulated NSR contaminant from the emission source(s) that will increase as a result of the modification, and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the change if the modification increases the design capacity of or potential to emit the regulated NSR contaminant at such emission source(s).



(3) submit a report to the department within 30 days after the end of each year during which records must be generated in accordance with Paragraph 231-11.2(c)(2) of this Part. The report must contain:

(i) the name, address, and telephone number of the major facility.

(ii) the annual emissions as calculated pursuant to Paragraph (c)(2) of this Section.

(iii) a comparison of actual annual emissions to the projected actual emissions and, if applicable, an explanation as to why the actual annual emissions exceeded the projected actual emissions.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 46: EPA Region 2 address. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.4, NSPS Subpart A

Item 46.1:

This Condition applies to: 1-RACKT Emission Unit: 1RACK1 Emission Unit: 1TANKS 1-TANK1

Process: ET1 RP1 Emission Source: TK031 Emission Unit: 1TANKS 1-TANK1

Process: ET1 RP1 Emission Source: TK114

Emission Unit: 1TANKS 1-TANK1 Process: ET1 RP1 Emission Source: TK115

Emission Unit:1TANKS1-TANK1TK032Process:ET1RP1Emission Source:TNK32

Emission Unit: 1TANKS1-TANK1TK039Process: ET1RP1Emission Source: TNK39

Emission Unit: 1TANKS Process:-GA1

Emission Source: TK114

These changes apply to all Subpart A conditions (Conditions 46 through 66). They should also apply to process BS1 and CD1.



Emission Unit: 1TANKS Process: GA1 Emission Source: TK115

Emission Unit: 1TANKS Process: GA1 Emission Source: TNK39

Item 46.2:

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the following address:

Director, Division of Enforcement and Compliance Assistance USEPA Region 2 290 Broadway, 21st Floor New York, NY 10007-1886

Copies of all correspondence to the administrator pursuant to this part shall also be submitted to the NYSDEC Regional Office issuing this permit (see address at the beginning of this permit) and to the following address:

NYSDEC Bureau of Quality Assurance 625 Broadway Albany, NY 12233-3258

Condition 47: Modification Notification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(a), NSPS Subpart A

Item 47.1:

This Condition applies to:

Process: ET1

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Unit: 1TANKS

Emission Source: TK114

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32

Emission Unit: 1TANKS Process: ET1 Emis

Emission Source: TNK39



Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 47.2:

Any owner or operator subject to 40 CFR Part 60 shall furnish the Administrator and this office with the following information:

- a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless the change is specifically exempted under 40 CFR Part 60. The notice shall be post marked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productivity capability of the facility before and after the change, and the expected completion date of the change. The Administrator and/or this Department may request additional information regarding the change.

Condition 48: Recordkeeping requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(b), NSPS Subpart A

Item 48.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS	



Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS	
Process: GA1	Emission Source: TNK39

Item 48.2:

Affected owners or operators shall maintain records of occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

Condition 49:	Compliance Certification
	Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(c), NSPS Subpart A

Item 49.1:

Emission Unit: 1-RACK1

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39

Item 49.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description: Affected owners or operators shall submit an excess

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emissions report and/or a summary report form (as defined in 40 CFR 60.7(d)) semi-annually (or more frequently as required by the applicable Subpart or the Administrator), to the Administrator. These reports shall be post marked no later than 30 days after each six (6) month period (or as appropriate), and shall contain the following information:

1) the magnitude of excess emissions computed, any conversion factors used, the date and time of each occurrence, and the process operating time during the reporting period;

2) specific identification of each period of excess emissions that occur during startup, shutdown, or malfunction, where the nature, cause, and corrective action are provided for a malfunction;

3) the date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

4) when no excess emissions have occurred or when the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be provided in the report.

Monitoring Frequency: CONTINUOUS Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 50: Excess emissions report. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(d), NSPS Subpart A

Item 50.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS



Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 50.2:

A summary report form, for each pollutant monitored, shall be sent to the Administrator in the form prescribed in Figure 1 of 40 CFR Part 60.7(d).

Condition 51: Monitoring frequency waiver. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(e), NSPS Subpart A

Item 51.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115

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Emission Unit: 1TANKS Process: GA1 Emission Source: TNK39

Item 51.2: Notwithstanding the frequency of reporting requirements specified in

paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the conditions in 40 CFR 60.7(e) are met.

Condition 52: Facility files for subject sources. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(f), NSPS Subpart A

Item 52.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Point: 00115
Emission Source: TK031
Emission Point: 00115
Emission Source: TK114
Emission Point: 00115
Emission Source: TK115
Emission Point: 00115
Emission Source: TNK32
Emission Point: 00115
Emission Source: TNK39
Emission Point: 00115
Emission Source: TK114
Emission Point: 00115
Emission Source: TK115
Emission Point: 00115
Emission Source: TNK39

Item 52.2:

The following files shall be maintained at the facility for all affected sources: all measurements, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part, recorded in permanent form suitable for inspections. The file shall be maintained for at least two years following the date of such



measurements, reports, and records.

Condition 53: Notification Similar to State or Local Agency Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(g), NSPS Subpart A

Item 53.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 53.2:

If notification substantially similar to that in 40 CFR Part 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR Part 60.7(a).

Condition 54: Performance testing timeline. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(a), NSPS Subpart A

Item 54.1:

This Condition applies to:

Emission Unit: 1RACK1
New York State Department of Environmental Conservation



Permit ID: 4-0101-00112/00029

Facility DEC ID: 4010100112

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 54.2:

Within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the facility, the owner or operator of the facility shall conduct performance testing and provide the results of such tests, in a written report, to the Administrator.

Condition 55: Performance test methods. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(b), NSPS Subpart A

Item 55.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS	
Process: ET1	Emission (

Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32



Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 55.2:

Performance testing shall be conducted in accordance with the methods and procedures prescribed in 40 CFR 60 or by alternative methods and procedures approved by the Administrator.

Condition 56:	Required performance test information.
	Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(c), NSPS Subpart A

Item 56.1:

This Condition applies to:

Emission Unit: 1RACK1	
Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39
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Item 56.2:

Performance tests shall be conducted under such conditions specified by the Administrator, based upon representative performance data supplied by the owner or operator of the facility.

Condition 57: Prior notice. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(d), NSPS Subpart A

Item 57.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 57.2:

The owner or operator shall provide the Administrator with prior notice of any performance test at least 30 days in advance of testing.

Condition 58: Performance testing facilities. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(e), NSPS Subpart A

Item 58.1: This Condition applies to:



Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 58.2:

The following performance testing facilities shall be provided during all tests:

1) sampling ports adequate for tests methods applicable to such facility;

2) a safe sampling platform;

3) a safe access to the sampling platform; and

4) utilities for sampling and testing equipment.

Condition 59: Number of required tests. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(f), NSPS Subpart A

Item 59.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK031



Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 59.2:

Each performance test shall consist of three separate runs, at the specified duration required in the applicable test method. Compliance with all applicable standards shall be determined by using the arithmetic means of the results of the three runs.

Condition 60: Availability of information. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.9, NSPS Subpart A

Item 60.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32

Emission Unit: 1TANKS Process: ET1 E

Emission Source: TNK39



Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 60.2:

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by 40 CFR Part 2.

Condition 61: Opacity standard compliance testing. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.11, NSPS Subpart A

Item 61.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 61.2:

The following conditions shall be used to determine compliance with the opacity standards:

1) observations shall be conducted in accordance with Reference Method 9, in



Appendix A of 40 CFR Part 60(or an equivalent method approved by the Administrator including continuous opacity monitors);

2) the opacity standards apply at all times except during periods of start up, shutdown, and malfunction; and

3) all other applicable conditions cited in section 60.11 of this part.

Condition 62: Compliance with Standards and Maintenance Requirements Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.11(d), NSPS Subpart A

Item 62.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 62.2:

At all times, including periods of startup, shutdown, and malfunction, owners and operators of this facility shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department and the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.



Condition 63: Circumvention. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.12, NSPS Subpart A

Item 63.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 63.2:

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

Condition 64: Monitoring requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.13, NSPS Subpart A

Item 64.1: This Condition applies to:



Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 64.2:

All continuous monitoring systems and devices shall be installed, calibrated, maintained, and operated in accordance with the requirements of section 60.13.

Condition 65: Modifications. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.14, NSPS Subpart A

Item 65.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1 End

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32

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Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 65.2:

Within 180 days of the completion of any physical or operational change (as defined in section 60.14), compliance with the applicable standards must be achieved.

Condition 66: Reconstruction Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.15, NSPS Subpart A

Item 66.1:

This Condition applies to:

Emission Unit: 1RACK1 Emission Unit: 1TANKS Process: ET1 Emission Source: TK031 **Emission Unit: 1TANKS** Process: ET1 Emission Source: TK114 Emission Unit: 1TANKS Process: ET1 Emission Source: TK115 Emission Unit: 1TANKS Process: ET1 **Emission Source: TNK32** Emission Unit: 1TANKS Process: ET1 Emission Source: TNK39 **Emission Unit: 1TANKS** Process: GA1 Emission Source: TK114 Emission Unit: 1TANKS Process: GA1 Emission Source: TK115 **Emission Unit: 1TANKS** Process: GA1 Emission Source: TNK39

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Item 66.2:

The following shall be submitted to the Administrator prior to reconstruction (as defined in section 60.15):

1) a notice of intent to reconstruct 60 days prior to the action;

2) name and address of the owner or operator;

3) the location of the existing facility;

4) a brief description of the existing facility and the components to be replaced;

5) a description of the existing air pollution control equipment and the proposed air pollution control equipment;

6) an estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility;

7) the estimated life of the facility after the replacements; and

8) a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

Condition 67: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.113b(a), NSPS Subpart Kb

Item 67.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114	Kb applies to Tanks 31, 32, 39, 114 & 115 for processes RP1, BS1 and CR1. This applies to all Kb conditions
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115	an Ko conditions.
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39	

Item 67.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> The facility operator shall conduct the following testing and maintenance procedures on the internal floating roof VOC control system for an applicable storage vessel when storing gasoline:

(1) Visually inspect the internal floating roof, the



primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) Visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Department in the inspection report required by this rule in Sec. 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with Volatile Organic Liquid (VOL). In no event shall inspections conducted in accordance with this requirement occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in item (2).

(4) Notify the regional office in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by items (1) and (3)



of this section to afford the Department the opportunity to have an observer present. If the inspection required by item (3) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Department at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department at least 7 days prior to the refilling.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 68: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.115b(a), NSPS Subpart Kb

Item 68.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS	



Process: GA1 Emission Source: TNK39

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 68.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The owner or operator shall keep a record of each inspection performed to monitor the condition of the internal floating roof. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

After each inspection that finds holes or tears in the seal or seal fabric, defects in the internal floating roof, or other control equipment defects, a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel, the nature of the defects, and the type and date of each repair made.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 69: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.116b, NSPS Subpart Kb

Item 69.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32



Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39

Item 69.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The facility shall maintain the following readily accessible records, for applicable storage vessels:

- records showing the dimension of the storage vessel

- an analysis showing the capacity of the storage vessel.

- a record of the Volatile Organic Liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below:

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar- month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil



with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference--see Sec. 60.17); or
(iii) Measured by an appropriate method approved by the Administrator; or
(iv) Calculated by an appropriate method approved by the Administrator.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 70: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(b), NSPS Subpart XX

Item 70.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 70.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description:

> Emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter loaded. An initial performance test is required to demonstrate compliance with the emission limit for the vapor processing system.

Parameter Monitored: VOC Upper Permit Limit: 35.0 milligrams per liter Reference Test Method: 25a or 25b Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST



METHOD INDICATED Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 71: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(e), NSPS Subpart XX

Item 71.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 71.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:

1. The owner or operator shall obtain the vapor tightness documentation described in paragraph 60.505(b) of 40 CFR 60.500 Subpart XX for each gasoline tank truck which is to be loaded at the facility.

2. The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the facility.

3. The owner or operator shall cross-check each tank identification number recorded per item 2 above with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded.

4. The terminal owner or operator shall notify the owner or operator of each nonvapor-tight gasoline tank truck loaded at the facility within 1 week after the documentation cross-check (Item #3).

5. The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained.

In addition, the terminal owner or operator shall keep documentation of all notifications required under item 4



above on file at the terminal for at least 5 years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 72: Truck loading compatibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(f), NSPS Subpart XX

Item 72.1: This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Item 72.2:

Gasoline loading limited to trucks with vapor collection equipment which is compatible with the terminal vapor collection system.

Condition 73: Vapor collection connection required Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(g), NSPS Subpart XX

Item 73.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Item 73.2:

The terminal and tank truck vapor collection systems must be connected during gasoline loading.

Condition 74: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(i), NSPS Subpart XX

Item 74.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 74.2:

Compliance Certification shall include the following monitoring:

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Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE Monitoring Description:

No pressure-vacuum vent in the terminal vapor collection system shall begin to open at a pressure less than 4,500 pascals.

Parameter Monitored: PRESSURE Lower Permit Limit: 4,500 Pascals Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 75: Definition of an affected source Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11081(a), Subpart BBBBBB

Item 75.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1RACK2 2-RACKR Process: R2G RPR

Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 75.2:

The affected source to which subpart BBBBBB applies is each area source bulk gasoline terminal, pipeline breakout station, pipeline pumping station, and bulk gasoline plant as identified below:

1) A bulk gasoline terminal that is not subject to the control requirements of 40CFR63, Subpart R or 40CFR63, Subpart CC.

2) A pipeline breakout station that is not subject to the control requirements of 40CFR63, subpart R.



- 3) A pipeline pumping station.
- 4) A bulk gasoline plant.

Condition 76: Compliance date for an existing source Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11083(b), Subpart BBBBBB

Item 76.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1RACK2 2-RACKR Process: FE2 FGR

Emission Unit:-IRACK2 2-RACKR Process: R2G RPR

Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 76.2:

An existing affected source must comply with the standards of this subpart no later than January 10, 2011.

Condition 77: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11087, Subpart BBBBBB

Item 77.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: 1-TANK1 Emission Unit: 1-TANKS

Process: GA1 RP1

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 77.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:



A facility which owns or operates a gasoline storage tank subject to this subpart and having a capacity equal to or exceeding 75 cubic meters shall equip each internal floating roof gasoline storage tank according to the requirements in (0.112b(a)(1)), except for the secondary seal requirements under §60.112b(a)(1)(ii)(B) and the requirements in §60.112b(a)(1)(iv)-(ix). The facility shall comply with the requirements of subpart BBBBBB by the applicable dates specified in §63.11083, except that if a storage vessel with a floating roof is not meeting the requirements of §63.11087(a) it must be in compliance at the first degassing and cleaning activity after January 10, 2011 or by January 10, 2018, whichever is first. The facility must comply with the testing and monitoring requirements specified in §63.11092(e)(1). Finally, the facility shall submit the following information as required in 40 CFR Part 60.115b(a):

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of (60.112b(a)(1)) and (60.113b(a)(1)). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in (60.113b(a)(2))are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

These records are to be maintained for a minimum of 5

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years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 78: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11088, Subpart BBBBBB

Item 78.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 78.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> The owner and/or operator of a gasoline loading rack having a throughput of greater than or equal to 250,000 gallons/day, shall be subject to the following requirements:

a) Equip the loading rack(s) with a vapor collection
system designed to collect the TOC vapors displaced from cargo tanks during product loading; and
b) Reduce emissions of TOC to less than or equal to 80 mg/l of gasoline loaded into gasoline cargo tanks at the loading rack; and
c) Design and operate the vapor collection system to prevent any TOC vapors collected at one loading rack from passing to another loading rack; and
d) Limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in §60.502(e)-(j). For the purposes of this condition, the term "tank truck' as used in §60.502(e)-(j) means "cargo tank" as defined in subpart BBBBBB in §63.11100.



The facility shall comply with the requirements of subpart BBBBBB by the applicable dates specified in §63.11083.

The facility must comply with the testing and monitoring requirements specified in §63.11092(a).

The facility must keep records and submit reports as specified in §63.11094 and 11095.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 79: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11089, Subpart BBBBBB

Item 79.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Item 79.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Each owner/operator of a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station subject to the provisions of subpart BBBBBB shall perform a monthly leak inspection of all equipment in gasoline service, as defined in §63.11100. For this inspection, detection methods incorporating sight, sound, and smell are acceptable.

A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

Each detection of a liquid or vapor leak shall be recorded



in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in §63.11089(d).

Delay of repair of leaking equipment will be allowed if the repair is not feasible within 15 days. The owner or operator shall provide in the semiannual report specified in §63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed.

The facility must comply with the requirements of subpart BBBBBB by the applicable dates in §63.11083.

The facility must submit the applicable notifications as required under §63.11093.

The facility must keep records and submit reports as specified in §63.11094 and 63.11095.

Monitoring Frequency: MONTHLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 80: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a), Subpart BBBBBB

Item 80.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 80.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description:

The owner and/or operator of a facility subject to the



emission standard in §63.11088 for gasoline loading racks must conduct a performance test on the vapor processing and collection systems according to either of the following methods;

- test methods and procedures in §60.503, except a reading of 500ppm shall be used to determine the level of leaks to be repaired under §60.503(b), or;

- alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

Upper Permit Limit: 80 milligrams per liter Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 81: Waiver of new performance test requirement by complying with state rule Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a)(2), Subpart

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Item 81.1: This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: R1G **RPT**

Emission Unit: 1RACK2 2-RACKR Process: R2G RPR

Item 81.2:

If the facility is operating a gasoline loading rack in compliance with 6 NYCRR Part 229.3(d)(1) which requires the loading rack to meet an emission limit of 80 mg/L of gasoline loaded, then the facility may submit a statement by a responsible official of the facility certifying the compliance status of the loading rack in lieu of the test required in \$63.11092(a)(1).

Condition 82: Waiver of new testing requirement due to previous test conducted within 5 prior year period Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a)(3), Subpart

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Item 82.1: This Condition applies to:

> Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

> Emission Unit: 1RACK2 2-RACKR Process:-R2G RPR

Item 82.2:

If the facility has conducted a performance test on the vapor processing and collection systems within 5 years prior to January 10, 2008, and the test is for the affected facility and is representative of current or anticipated operating processes and conditions, the facility may submit the results of such testing in lieu of the test required under §63.11092(a)(1), provided the testing was conducted using the test methods and procedures in §60.503.

Should USEPA deem the prior test data unacceptable, the facility is still required to meet the requirement to conduct an initial performance test within 180 days of the applicable compliance date in §63.11083.

Condition 83: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB

Item 83.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 83.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES hour rolling average. In the event of CEMS downtime, alternative monitoring parameter

For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the Add condition for VRUTK continuous monitoring condition, 40 CFR 63.11092(b). See Form.

The Terminal will use a VRU with a Continuous Emissions Monitoring System (CEMS) capable of measuring organic compound concentration per 40 CFR 63.11092(b)(1)(i)(A). The average hydrocarbon outlet percent will be monitored to ensure it does not exceed a six hour average limit of 0.2 vol% propane (2000 ppm), which corresponds to the permitted limit of 2 mg/L. The averaging time is a six hour rolling average. In the event of CEMS downtime, alternative monitoring parameters will be observed in accordance with 40 CFR 63.11092(b)(1)(i)(B).

he Each calendar month the vapor collection system and vapor processing system shall be inspected during loading events for total organic compounds liquid or vapor leaks. For purposes of this paragraph, sight, sound or smell are acceptable inspection/detection methods. Each detection of a leak shall be recorded and the source of the leak repaired.
 FIN This condition applies to VRUTK.

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carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to conduct annual testing of the carbon activity for the carbon in each carbon bed. Carbon activity shall be tested in accordance with the butane working capacity test of the American Society for Testing and Materials (ASTM) Method D 5228-92 (incorporated by reference, see §63.14), or by another suitable procedure as recommended by the manufacturer.

Monitoring Frequency: ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 84: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB

Item 84.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 84.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the



carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to conduct monthly measurements of the carbon bed outlet volatile organic compounds (VOC) concentration over the last 5 minutes of an adsorption cycle for each carbon bed, documenting the highest measured VOC concentration. Measurements shall be made using a portable analyzer, in accordance with 40CFR Part 60, Appendix A-7, EPA Method 21 for open-ended lines.

Reference Test Method: Method 21 Monitoring Frequency: MONTHLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 85: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBB

Item 85.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 85.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring



system (CMS) while gasoline vapors are displaced to the carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to monitor the vacuum level using a pressure transmitter installed in the vacuum pump suction line, with the measurements displayed on a gauge that can be visually observed. Each carbon bed shall be observed during one complete regeneration cycle on each day of operation of the loading rack to determine the maximum vacuum level achieved.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 86: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('2'), NESHAP Subpart BBBBBB

Item 86.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 86.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to These conditions should all be revised for CEMS with alternative monitoring as back up when CEMS is down. See application forms.



the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in (3.11092(b)(1)(i)(B)) requires the owner/operator to develop and submit to NYSDEC a monitoring and inspection plan that describes the owner/operator's approach for meeting the following requirements:

1) The lowest maximum required vacuum level and duration needed to assure regeneration of the carbon beds shall be determined by an engineering analysis or from the manufacturer's recommendation and shall be documented in the monitoring and inspection plan.

2) The owner/operator shall verify, during each day of operation of the loading rack, the proper valve sequencing, cycle time, gasoline flow, purge air flow, and operating temperatures. Verification shall be through visual observation or through an automated alarm or shutdown system that monitors and records system operation.

3) The owner/operator shall perform semi-annual preventive maintenance inspections of the carbon adsorption system according to the recommendation of the manufacturer of the system.

4) The monitoring plan developed above shall specify conditions that would be considered malfunctions of the carbon adsorption system during the inspections of automated monitoring performed under items 1-3 above, describe specific corrective actions that will be taken to correct any malfunction, and define what the owner/operator would consider to be a timely repair for each potential malfunction.

5) The owner/operator shall document the maximum vacuum level observed on each carbon bed from each daily inspection and the maximum VOC concentration observed from each carbon bed on each monthly inspection as well as any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also



include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 87: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(iii), Subpart

BBBBBB

Item 87.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2 2-RACKR	
Process: R2G RPR	Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 87.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> For each performance test conducted under §63.11092(a)(1), the owner/operator must determine a monitored operating parameter value for any thermal oxidation system other than a flare using one of the following procedures:

(A) A continuous parameter monitoring system (CPMS) capable of measuring temperature shall be installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs.

(B) As an alternative, the facility may choose to meet the requirements listed below:

(1) The presence of a thermal oxidation system pilot flame shall be monitored using a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, installed in Add condition for Continuous Parameter Monitoring System for VCURR temperature monitoring with alternative monitoring as back up. See forms 40 CFR 63.11092(b).



proximity to the pilot light to indicate the presence of a flame.

(2) Develop and submit to NYSDEC a monitoring and inspection plan that describes the facility's approach for meeting the following requirements:

The thermal oxidation system shall be equipped to automatically prevent gasoline loading operations from beginning at any time that the pilot flame is absent.
The facility shall verify, during each day of operation of the loading rack, the proper operation of the assist-air blower, the vapor line valve, and the emergency shutdown system. Verification shall be through visual observation or through an automated alarm or shutdown system that monitors and records system operation.
The facility shall perform semi-annual preventive maintenance inspections of the thermal oxidation system according to the recommendations of the manufacturer of the system.

- The monitoring plan developed above shall specify conditions that would be considered malfunctions of the thermal oxidation system during the inspections or automated monitoring performed as stated above, describe specific corrective actions that will be taken to correct any malfunction, and define what the facility would consider to be a timely repair for each potential malfunction.

- The facility shall document any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form or record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 88: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(b), Subpart BBBBBB

Item 88.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FT1 FGT

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 88.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> The facility shall keep records of the test results for each gasoline cargo tank loading at the facility as specified below:

1) Annual certification testing performed under §63.11092(f)(1) and periodic railcar bubble leak testing performed under §63.11092(f)(2).

2) The documentation file shall be kept up-to-date for each gasoline cargo tank loading at the facility. The documentation for each test shall include, as a minimum, the following information:

- Name of Test: Annual Certification Test - Method 27 or

Periodic Railcar Bubble Leak Test Procedure.

- Cargo tank owner's name and address
- Cargo tank identification number
- Test location and date
- Tester name and signature

- Witnessing inspector, if any: name, signature, affiliation

- Vapor tightness repair: Nature of repair work and when performed in relation to vapor tightness testing

- Test results: Test pressure, pressure or vacuum change, mm of water; time period of test; number of leaks found with instrument; and leak definition

3) If the facility is complying with the alternative requirements in §63.11088(b), the facility must keep records documenting that the facility has verified the vapor tightness testing according to the requirements of EPA.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 89: Compliance Certification

Renewal 2/Mod 4/Active

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Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(c), Subpart BBBBBB

Item 89.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FT1 FGT

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 89.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in §63.11094(b), the facility may keep an electronic copy of each record which would be instantly available at the terminal. The copy of each record above must be an exact duplicate image of the original paper record with certifying signatures.

For facilities which use a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation must be made available (e.g., via facsimile) for inspection by EPA's or NYSDEC's delegated representatives during the course of a site visit, or within a mutually agreeable time frame.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 90: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(d), Subpart BBBBBB

Item 90.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 90.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

If the facility is subject to the equipment leak provisions of §63.11089, then the facility shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. For facilities electing to implement an instrument program under §63.11089, the record shall contain a full description of the program.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 91: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(e), Subpart BBBBBB

Item 91.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process:-FE2 FGR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 91.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:



If the facility is subject to the requirements for equipment leak inspections in §63.11089, then the facility shall record in the log book for each leak that is detected, the information below:

The equipment type and identification number.
 The nature of the leak (i.e., vapor or liquid) and the method of detection (i.e., sight, sound, or smell).
 The date the leak was detected and the date of each attempt to repair the leak.
 Repair methods applied in each attempt to repair the leak.
 "Repair delayed" and the reason for the delay if the leak is not repaired within 15 calendar days after discovery of the leak.

6) The expected date of successful repair of the leak if the leak is not repaired within 15 days.7) The date of successful repair of the leak.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 92: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(f), Subpart BBBBBB

Item 92.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT Emission Source: VRUTK

Emission Unit: 1-RACK2 2-RACKR Process:-R2G RPR

Emission Unit: <u>1-RACK2</u> 2-RACKR Process: R2G RPR Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 92.2:

Compliance Certification shall include the following monitoring:


Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The facility shall keep the following records:

1) Keep an up-to-date, readily accessible record of the continuous monitoring data required under §63.11092(b) or §63.11092(e). This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record.

2) Record and report simultaneously with the Notification of Compliance Status required under §63.11093(b) all data and calculations, engineering assessments, and manufacturer's recommendations used in determining the operating parameter value under §63.11092(b) or §63.11092(e).

3) Keep an up-to-date, readily accessible copy of the monitoring and inspection plan required under \$63.11092(b)(1)(i)(B)(2) or \$63.11092(b)(1)(iii)(B)(2).

4) Keep an up-to-date, readily accessible copy of all system malfunctions, as specified in §63.11092(b)(1)(i)(B)(2)(v) or §63.11092(b)(1)(iii)(B)(2)(v).

5) If the facility requests approval to use a vapor processing system or monitor an operating parameter other than those specified in §63.11092(b), the facility shall submit a description of planned reporting and recordkeeping procedures.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 93: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11095(a), Subpart BBBBBB

Item 93.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK1 1-RACKT Process:-R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Emission Unit: 1-TANKS 1-TANK1 Process: GA1 RP1

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 93.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Each facility with a bulk terminal or pipeline breakout station that is subject to control requirements of subpart BBBBBB shall include in a semiannual compliance report the following information, as applicable:

1) For storage vessels, if the facility is complying with options 2(a), 2(b), or 2(c) in table 1 of subpart BBBBBB, the informations specified in §60.115b(a), §60.115b(b), or §60.115b(c), depending upon the control equipment installed, or, if the facility is complying with option 2(d) in table 1 of subpart BBBBBB, the information specified in §63.1066.

2) For loading racks, each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility.

3) For equipment leak inspections, the number of equipment leaks not repaired within 15 days after detection.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 94: Compliance Certification

Renewal 2/Mod 4/Active



Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11095(b), Subpart BBBBBB

Item 94.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 94.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

A facility that is subject to the control requirements in Subpart BBBBBB, shall submit an excess emissions report to NYSDEC at the time the semiannual compliance report is submitted. Excess emissions events under subpart BBBBBB, and the information to be included in the excess emissions report, are as follows:

1) Each instance of a non-vapor-tight gasoline cargo tank loading at the facility in which the facility failed to take steps to assure that such cargo tank would not be reloaded at the facility before vapor tightness documentation for that cargo tank was obtained.

2) Each reloading of a non-vapor-tight gasoline cargo tank at the facility before vapor tightness documentation for that cargo tan is obtained by the facility in accordance with §63.11094(b).

3) Each exceedance or failure to maintain, as appropriate, the monitored operating parameter value determined under \$63.11092(b). The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a description and timing of the steps taken to repair or perform maintenance on the



vapor collection and processing systems or the continuous monitoring system.

4) Each instance in which malfunctions discovered during the monitoring and inspections required under §63.11092(b)(1)(i)(B)(2) and (b)(1)(iii)(B)(2) were not resolved according to the necessary corrective actions described in the monitoring and inspection plan. The report shall include a description of the malfunction and the timing of the steps taken to correct the malfunction.

5) for each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection:

- the date on which the leak was detected;
- the date of each attempt to repair the leak;
- the reasons for the delay of repair; and
- the date of successful repair.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period.

The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 95: Applicability of MACT General Provisions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11098, Subpart BBBBBB

Item 95.1:

This Condition applies to:

Emission Unit:1-RACK11-RACKTProcess:FG1FGTEmission Unit:1RACK11-RACKTProcess:RPT1-RACKTEmission Unit:1RACK22-RACKRProcess:FGR2-RACKRProcess:FGR2-RACKRProcess:RPR2-RACKRProcess:RPR1-TANK1Process:GA1RP1

Item 95.2:



Table 3 of subpart BBBBBB lists which parts of the general provisions in subpart A apply to the facility.

Condition 4-11: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 4-11.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

3-RACKM	Add process RPM	
Emission Unit: 1-RACK3 Process: R3C CDM	Emission Source: VCUM2	Marine VCU Minor Mod
3-RACKM Emission Unit: 1-RACK3 Process: R3C CDM	VCUM1 Emission Source: VCUML	proposed in current application.

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 4-11.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> Once each day, while the Vapor Combustion Unit (VCU) is operating, the permittee will inspect the VCU for proper operation. Proper operation is that the pilot is lit for loading operations and the Ultraviolet Flame detection equipment indicates the presence of a flame.

An excursion occurs if the product is being loaded without the pilot flame being lit.

The facility shall comply with 40 CFR 64.7 and 64.9.

Monitoring Frequency: PER DELIVERY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 6 calendar month(s).

Condition 4-12: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 4-12.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: Add condition for continuous temperature monitor/MOPV for VCUM1 and VCUM2 to this condition. See separate forms (40 CFR Part 64).

Add condition for continuous temperature monitor/MOPV for VCURR to this condition. See form (40 CFR Part 64).



3-RACKM	
Emission Unit: 1-RACK3	
Process: R3C CDM	Emission Source: VCUM2
3-RACKM Emission Unit: 1-RACK3	VCUM1
Process: R3C CDM	Emission Source: VCUML
Regulated Contaminant(s):	

CAS No: 0NY998-00-0 VOC

Item 4-12.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

A third party contractor specializing in Vapor Combustion Unit (VCU) maintenance shall inspect and perform any necessary maintenance on the unit once every six months. The facility shall comply with 40 CFR 64.7 and 40 CFR 64.9. Records documenting the semi-annual maintenance occured shall be maintained in accordance with 6 NYCRR 201-6.5(c)(1) and (c)(2).

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 6 calendar month(s).

Condition 96: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 96.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

2-RACKR

Emission Unit: 1-RACK2	Emission Point: 00002 0RRK1
Process: R2E RPR	Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 96.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

A third party contractor specializing in Vapor Combustion Unit (VCU) maintenance shall inspect and perform any necessary maintenance on the unit once every six months. The facility shall comply with 40 CFR 64.7 and 40 CFR



64.9. Records documenting the semi-annual maintenance occured shall be maintained in accordance with 6 NYCRR 201-6.5(c)(1) and (c)(2).

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 101: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 101.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1E RPT Emission Source: VRUTK

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 101.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

A third party contractor, specializing in VRU maintenance, shall perform preventative maintenance once each-quarter semi-annual period. The facility shall comply with 40 CFR 64.7 and 64.9. Records documenting that the quarterly semi-annual maintenance occurred shall be maintained in accordance with 201-6.5(c)(1) and (c) (2).

Monitoring Frequency: QUARTERLY SEMI-ANNUAL Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 102: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 102.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: CAM does not require a specific time frame for PM. 6B Requires semiannual.

*Combine Conditions 102 & 103. See notes on following pages.



1-RACKT

Emission Unit: 1-RACK1 Process: R1E RPT

Emission Point: 00001 0TRK1 Emission Source: VRUTK

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 102.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Indicator 1: Temperature -- The temperature of the carbon bed will be monitored and recorded daily-during truck loading via a probe inserted in the carbon bed. If the temperature is between 150 175 and 200 degree F, a second temperature reading will be obtained during the next loading cycle of that carbon bed.

An excursion:

¹ If the the temperature exceeds 200 degree F during a loading cycle of either carbon bed, an excursion has occurred.

2 If the second temperature reading exceeds 150 1)' degree F,an excursion has occurred.

The facility shall comply with 40 CFR 64.7 and 64.9. Records shall be maintained in accordance with Part 201-6.5(c)(1) and (c)(2).

Parameter Monitored: TEMPERATURE Upper Permit Limit: 200 degrees Fahrenheit Monitoring Frequency: DAILY Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 103: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 103.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

1-RACKT

Emission Unit: 1-RACK1 Process: R1E **RPT** Emission Point: 00001 0TRK1 Emission Source: VRUTK A CEMS is used as the continuous monitoring parameter for CAM. Daily drift checks are performed automatically by the system. Daily drift checks are used to evaluate the CEM needs to be calibrated.

The following parameters will be monitored when the CEMS is not operational:



Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 103.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Indicator 2: Vacuum -- The facility will monitor the operating vacuum of each carbon bed during a regeneration cycle once per day and manually record the vacuum.

The greatest vacuum during one regeneration cycle of each bed shall be manually recorded based on the gauge reading. The duration of the reading shall be one complete cycle. If the recorded value for either bed is less than the limit, a second reading shall be collected during the course of the next regeneration cycle of the bed, approximately 30 minute cycle.

An excursion: occurs

If the operating vacuum of two consecutive regeneration cycles for a bed fails to attain at least $25 \ 26$ in Hg during both regeneration cycles of the bed, an excursion has occurred.

The facility shall comply with 40 CFR 64.7 and 64.9. Records shall be maintained in accordance with Part 201-6.5 (c)(1) and (c)(2).

Parameter Monitored: VACUUM Lower Permit Limit: 25 26 inches of mercury Monitoring Frequency: DAILY Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 105: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 105.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2

Emission Point: 00002

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Process: R2E		Emission Source: VCURR	
Regulated Contan CAS No:	ninant(s): - 0NY998-00-0	₩ ₩	
Item 105.2: Compliance Certification	on shall include th	e following monitoring:	Duplicate
Monitoring Type: REC Monitoring Description A third p Unit (VC necessary The facil 64.9. Re occured s 201-6.5(c	ORD KEEPING/ ÷ arty contractor spon U) maintenance spon maintenance on maintenance on maintenance on ty shall comply we cords documentin shall be maintaine c)(1) and (c)(2).	MAINTENANCE PROCEDURES ecializing in Vapor Combustion hall inspect and perform any the unit once every six months. with 40 CFR 64.7 and 40 CFR og the semi-annual maintenance d in accordance with 6 NYCRR	•

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

**** Emission Unit Level ****

Condition 106: Emission Point Definition By Emission Unit Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 106.1(From Mod 4):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK3 3-RACKM

Emission Point: 00003 0MDR1 Height (ft.): 36

Emission Point: 0MDR3

Diameter (in.): 72 NYTMN (km.): 4720.724 NYTME (km.): 601.833

Emission Point: 00006 0MDR2 Height (ft.): 36 Diameter (in.): 72 NYTMN (km.): 4720.645 NYTME (km.): 602.056

Item 106.2(From Mod 4):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK4

Emission Point: 00005



 Height (ft.): 36
 Diameter (in.): 72

 NYTMN (km.): 4720.645
 NYTME (km.): 602.056

Item 106.3(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK1 1-RACKT

Emission Point: 0TRK2

Emission Point: 00001 0TRK1 Height (ft.): 19 Diameter (in.): 12 NYTMN (km.): 4720.691 NYTME (km.): 602.067

Item 106.4(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK2 2-RACKR

Emission Point: 00002 0RRK1 Emission Point: 0RRK2 Height (ft.): 37 Diameter (in.): 90 NYTMN (km.): 4720.358 NYTME (km.): 601.86

Item 106.5(From Mod 2):

The following emission points are included in this permit for the cited Emission Unit:

. _

Emission Unit: 1-TANKS 1-TA	NK1
Emission Point: 001114 0T114 Height (ft.): 48 NYTMN (km.): 4720.724	Diameter (in.): 81 1,440 NYTME (km.): 601.833
Emission Point: 00115 0T115 Height (ft.): 48 NYTMN (km.): 4720.724	Diameter (in.): 81 1,800 NYTME (km.): 601.833
Emission Point: 00117 0T117 Height (ft.): 48 NYTMN (km.): 4720.724	Diameter (in.): 81 1,320 NYTME (km.): 601.833
Emission Point: 00118 0T118 Height (ft.): 48 NYTMN (km.): 4720.675	Diameter (in.): 63 1,200 NYTME (km.): 601.694
Emission Point: 00119 0T119 Height (ft.): 48 NYTMN (km.): 4720.654	Diameter (in.): 57 960 NYTME (km.): 601.762
Emission Point: 00120 0T120 Height (ft.): 48 NYTMN (km.): 4720.601	Diameter (in.): 57 960 NYTME (km.): 601.924
Emission Point: 00121 0T121 Height (ft.): 48	Diameter (in.): 81 1,800

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 NYTMN (km.): 4720.724
 NYTME (km.): 601.833

 Emission Point:
 00130

 Height (ft.): 48
 Diameter (in.): 81 900

 NYTMN (km.): 4720.551
 NYTME (km.): 602.053

 Emission Point:
 00T31

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Diameter (in.):
 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

111351011101111.00137	
Height (ft.): 48 45	Diameter (in.): 78 1,500
NYTMN (km.): 4720.645	NYTME (km.): 602.056

Condition 107: Process Definition By Emission Unit Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 107.1(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

 Emission Unit:
 1-RACK1

 Process: R1D
 Source Classification Code: 4-04-001-50

 Process Description: Emissions from Rack 1 while loading distillate.

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.2(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

 Emission Unit:
 1-RACK1

 Process:
 R1E

 FGT
 Source Classification Code:

 4-04-001-51

 Process Description:
 Emissions from ethanol loading at Rack 1. Fugitive emissions from loading trucks at Truck Rack.

Emission Source/Control: VRUTK - Control VACTK - Control Control Type: VAPOR RECOVERY SYS(INCL: Control Type: Vac Assist Vapor Reduction System CONDENSERS, HOODING, OTHER ENCLOSURES) RACKT Emission Source/Control: RACK1 - Process

Design Capacity: 888,300,000 gallons per year

Item 107.3(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit:1-RACK11-RACKTProcess:R1GRPTSource Classification Code: 4-04-001-53

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Process Description: from loading refined products into trucks at Truck Rack. Emissions associated with loading gasoline/ethanol at Rack 1.

Emission Source/Control: VRUTK - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES)

RACKT

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.4(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR Emission Unit: 1-RACK2 Process: R2D RPR Source Classification Code: 4-04-001-50 4-04-001-53 Process Description: Emissions associated with loading distillate at Rack 2. refined product into rail cars at Rail Rack. RACKR Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.5(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: <u>1-RACK3</u> 2-RACKR Process: FG3 FGR Source Classification Code: 4-04-001-51 Process Description: Emissions associated with fugitive emissions from loading rail cars at Rail Rack. Fugitive HAP/VOC emissions from Rack 3 and associated piping. RACKR Emission Source/Control: VACRR

Emission Source/Control: RACK3 - Process

Item 107.6(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit:1-RACK33-RACKMProcess:-R3C RPMSource Classification Code: 4-06-002-98Process Description:

Emissions associated with loading crude oil at marine from loading refined products into marine vessels. loading dock.

Control Type: Vac Assist Vapor Reduction System

Emission Source/Control: VCUM2 - Control Control Type: THERMAL OXIDATION VCUM1

Emission Source/Control: VCUML - Control Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR COLLECTION AND COMBUSTION UNIT)

RACKM

Emission Source/Control: RACK3 - Process

Item 107.7(From Mod 4):



This permit authorizes the following regulated processes for the cited Emission Unit: 3-RACKM Emission Unit: 1-RACK3 Process: R3D FGM Source Classification Code: 4-04-001-50 4-04-001-51 **Process Description:** Emission associated with loading marine vessels with distillate at Rack 3. fugitive emissions from loading marine vessels at dock. RACKM Emission Source/Control: VACMD - Control Emission Source/Control: RACK3 - Process Control Type: Vac Assist Vapor Reduction System Item 107.8(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: 3-RACKM Emission Unit: 1-RACK3 Process: R3E BSM Source Classification Code: 4-06-002-98 Process Description: Marine loading of ethanol at Rack 3. Emissions from loading blendstock into marine vessels. Emission Source/Control: VCUM2 - Control Emission Source/Control: VCUML - Control VCUM1 Control Type: Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR COLLECTION AND COMBUSTION UNIT) Marine VCU Minor Mod language RACKM Emission Source/Control: RACK3 - Process replaced by language proposed in current application. Item 107.9(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: Emission Unit: 1-RACK3 3-RACKM Process: R3G CDM Source Classification Code: 4-06-002-98 Process Description: Marine loading of gasoline at Rack 3. Emissions from loading crude oil into marine vessels. VCUM1 Emission Source/Control: VCUML - Control Emission Source/Control: VCUM2 - Control Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR Control Type: COLLECTION AND COMBUSTION UNIT) RACKM Marine VCU Minor Mod language Emission Source/Control: RACK3 - Process replaced by language proposed in current application. Item 107.10(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: 1-FUGTV Emission Unit: 1-RACK4 Process: FG4 FUG Source Classification Code: 4-04-001-51 Process Description: Emissions associated with HAP/VOC from Rack 4 and Facility-wide emissions from pumps, valves, flanges, and misc appurtenances. associated components. FUGTV Emission Source/Control: RACK4 - Process Item 107.11(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: Emission Unit: 1-RACK4 Process: R4D Source Classification Code: 4-04-001-51

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Process Description:

Emissions associated with distillate loading for additional rail spur.

Emission Source/Control: RACK4 - Process

Item 107.12(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit: 1-TANK1

Emission Unit: 1-TANKS Process: CR1 Source Classification Code: 4-03-010-99 Process Description: Crude Oil Storage Tanks used for storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF

Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK31C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK32C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK031 - Process Design Capacity: 3,829,140 gallons <u>4,200,000</u>

Emission Source/Control: TK114 - Process



Design Capacity: 3,715,740 gallons 3,887,898 Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons 5,851,902 Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons 3,028,032 Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons 2,426,550 Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons 1,619,268 Emission Source/Control: TK120 - Process Design Capacity: 1,364,748 gallons 1,640,940 Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons 5,370,204 Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons 1,512,714 TK032 Emission Source/Control: TNK32 - Process Design Capacity: 3,829,140 gallons 4,200,000 TK039 Emission Source/Control: TNK39 - Process Design Capacity: 139,344,878 gallons 4,200,00

Item 107.13(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: <u>1-TANKS</u> 1-TANK1 Process: ET1 RP1 Source Classification Code: 4-03-010-99 Process Description: Refined product Ethanol storage tanks used for the storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF



Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK31C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK32C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK031 - Process Design Capacity: 3,829,140 gallons

Emission Source/Control: TK114 - Process Design Capacity: 3,715,740 gallons

Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons

Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons

Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons

Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons

Emission Source/Control: TK120 - Process Design Capacity: 1,364,748 gallons

Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons

Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons TK032 Emission Source/Control: TNK32 - Process Design Capacity: 3,829,140 gallons TK039 Emission Source/Control: TNK39 - Process

Design Capacity: 139,344,878 gallons



Item 107.14(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-TANKS 1-TANK1 Process: GA1 BS1 Source Classification Code: 4-04-001-60 4-03-101-99 Process Description: Blendstock Gasoline storage tanks used for storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF

Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK114 - Process Design Capacity: 3,715,740 gallons

Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons

Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons

Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons

Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons

Emission Source/Control: TK120 - Process



Design Capacity: 1,364,748 gallons

Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons Add CR1 per emission unit matrix. Same sources and controls as RP1.

Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons TK039

Emission Source/Control: TNK39 - Process Design Capacity: 139,344,878 gallons

Item 107.15(From Mod 1):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-RACK1 Process: FG1 FGT Source Classification Code: 4-04-001-51 Process Description: Fugitive HAP/VOC emissions from Rack 1 and associated piping. RACKT

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.16(From Mod 1):

This permit authorizes the following regulated processes for the cited Emission Unit: 1-RACKT

Emission Unit: 1-RACK1 Process: FT1 FGT Source Classification Code: 4-04-001-54 Process Description: Fugitive truck emissions while loading products. RACKT

Emission Source/Control: TRUC1 - Process

Item 107.17(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-RACK2 Process: FE2 FGR Source Classification Code: 4-04-001-51 Process Description: Fugitive VOC/HAP emmisions from Rack 2 and associated piping. RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.18(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR Emission Unit: 1-RACK2 Process: R2E RPR Source Classification Code: 4-06-002-98 Process Description: Emissions while loading ethanol in railcars (Rack 2). These need to be modified per the permit matrix. Add 1-FUGTV for facility wide fugitives, FGT, FGR and FGM are fugitives associated with loading only.

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Emission Source/Control: VCURR - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES) RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.19(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR

Emission Unit: 1-RACK2 Process: R2G RPR Source Classification Code: 4-04-001-53 Process Description: Emissions associated with loading gasoline/ethanol at Rack 2.

Emission Source/Control: VCURR - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES)

RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.20(From Mod 0):

This permit authorizes the following regulated processes for the cited Emission Unit:

 I-TANK1

 Emission Unit:
 I-TANKS

 Process:
 IFG PCW
 Source Classification Code: 4-07-999-97

 Process Description:
 Emissions associated with wastewater tank contaminated with gasoline and distillates.

Emission Source/Control: 1WATR - Process Design Capacity: 1,307,796 gallons 1,512,714 Tank 130 is now in this Emission Unit only.



STATE ONLY ENFORCEABLE CONDITIONS **** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state applicable requirements and are not subject to compliance certification requirements unless otherwise noted or required under 6 NYCRR Part 201.

Condition 108:	Contaminant List	
	Effective between the dates of	03/03/2011 and 03/02/2016

Applicable State Requirement:ECL 19-0301

Item 108.1:

Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 000064-17-5 Name: ETHYL ALCOHOL (ETHANOL)



CAS No: 001634-04-4 Name: METHYL TERTBUTYL ETHER

CAS No: 0NY100-00-0 Name: HAP

CAS No: 0NY998-00-0 Name: VOC

Condition 109: Compliance Demonstration Effective between the dates of 03/03/2011 and 03/02/2016

Applicable State Requirement: ECL 19-0301 (3) (b)

Item 109.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s): CAS No: 001634-04-4 METHYL TERTBUTYL ETHER

Item 109.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description: Methyl-tertiary butyl ether (MTBE) shall not be used as a gasoline additive.

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE Paparting Paguiramente: SEML ANNUALLY (CALENDAR)

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 110: Unavoidable noncompliance and violations Effective between the dates of 03/03/2011 and 03/02/2016

Applicable State Requirement:6 NYCRR 201-1.4

Item 110.1:

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

(a) The facility owner and/or operator shall compile and maintain records of all equipment maintenance or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where conditions elsewhere in this permit which contain more stringent reporting and notification

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provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superceded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.

(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.

(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

Condition 1-9: Visible Emissions Limited Effective between the dates of 08/10/2011 and 03/02/2016

Applicable State Requirement:6 NYCRR 211.2

Item 1-9.1:

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.



Project Emission Potential

Total Project Emission Potential

		ACTUALS			BASELINE	PROJECTED	PROJECT		
	2015	2016	2017	2018	EMISSIONS*	EMISSIONS	POTENTIAL	PROJECTED THROUGHFUT FOR FEF (gallons)	
Marine Loading of Blendstock Gasoline (See Pg 2, Calc A)	**	**	**	**	**	3.17	3.17	380,000,000	
Marine Loading of Gasoline / Ethanol / Distillate*** (See Pg 2, Calc B)	2.221	5.251	3.617	0.748	3.74	3.08	NA	369,000,000	1,928,300,000
Truck Loading of Conventional Gasoline / Ethanol / Distillate*** (See Pg 2, Calc C)	0.708	0.799	1.057	1.022	0.75	7.34	6.58	879,300,000	
Rail Loading of Conventional Gasoline / Ethanol / Distillate*** (See Pg 2, Calc D)	2.604	2.815	2.883	3.127	2.71	2.50	NA	300,000,000	
Marine Loading of Crude Oil (See Pg 2, Calc E)	7.258	1.457	0.076	0.000	4.36	3.76	NA	450,000,000	450,000,000
28 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.989	0.53	0.43	NA	****	
29 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.988	0.53	0.43	NA	****	
30 (Distillate)*** (See Note 6)	0.528	0.528	0.695	0.988	0.53	0.43	NA	****	****
64 (Distillate)*** (See Note 6)	0.218	0.218	0.431	0.621	0.22	0.43	0.21	****	-
33 (Distillate)*** (See Note 6)	0.065	0.528	0.695	0.988	0.30	0.43	0.13	****	
Boiler Emissions (See Note 7)	**	**	**	**	**	1.23	1.23	-	-
Additional Fugitive Emissions Associated with Boilers	**	**	**	**	**	0.84	0.84	-	-
31 (Gas / Ethanol / Crude)	3.960	3.195	2.776	2.764	3.58	5.73	2.15	273,731,737	
32 (Gas / Ethanol / Crude)	4.520	3.195	2.776	2.764	3.86	5.73	1.87	273,731,737	
39 (Gas / Ethanol / Crude)	3.036	2.545	2.208	4.496	2.79	4.33	1.54	221,283,128	
114 (Gas / Ethanol / Crude)	0.266	0.303	0.345	0.337	0.28	4.06	3.77	367,729,496	
115 (Gas / Ethanol / Crude)	0.369	0.413	0.472	0.462	0.39	5.77	5.38	501,262,444	
117 (Gas / Ethanol / Crude)	3.051	3.050	3.065	3.045	3.05	2.88	NA	239,692,731	2,885,540,000
118 (Gas / Ethanol / Crude)	2.968	4.344	4.350	4.351	3.66	5.07	1.41	202,066,061	-
119 (Gas / Ethanol / Crude)	3.109	3.306	3.317	3.302	3.21	3.66	0.45	145,439,719	
120 (Gas / Ethanol / Crude)	0.179	0.200	0.202	0.197	0.19	3.21	3.02	103,021,903	
121 (Gas / Ethanol / Crude)	7.215	7.674	7.694	7.666	7.44	9.51	2.06	557,581,044	
TOTAL	43.331	40.877	38.046	38.855	42.10	73.99	33.82		
			•	Projec	t Emission Potential	-	33.82		

All emissions in tons per year

Actuals do not include emissions from tank maintenance activities since no modifications to these activities are being requested.

*Baseline Emissions were calculated using 2015 & 2016.

**No past actual emissions from blendstock loading or the proposed boilers, as these activities are not currently permitted.

***Distillate storage emissions (projected and past actuals) are standing losses only.

****No distillate throughput was modeled through distillate tanks, as all of the 1.9283 billions gallons of throughput was modeled as gasoline through IFR Tanks. Distillate standing losses were included for all distillate tanks (See note 1).

Notes:

1. Tank Scenario: The 1.9283 billion gallons of refined product is distributed amongst all IFR tanks as Conventional Gasoline. Working losses from 380 million gallons of blendstock /component is distributed amongst the previously permitted blendstock IFR tanks and included in addition to the gasoline working losses. And working losses from 450 million gallons of crude oil is distributed amongst all IFR tanks and included in addition to the gasoline working losses. And working losses are all assumed to be gasoline and/or blendstock because it is more conservative to assume IFR tank standing losses are from gasoline and/or blendstock storage. All distillate tanks are shown with distillate standing losses. Working losses are not considered for distillate tanks because it is more conservative to assume the entire 1.9283 billion gallons of refined product is gasoline. Additional throughput is included for tank-to-tank transfers.

2. Loading Scenario: 1.9283 billion gallons total throughput, 380 million gallons Blendstock, 879.3 million gallons conventional gasoline or lower RVP product at Truck Loading w/ VAC and VRU @ 2 mg/L, 300 million gallons conventional gasoline or lower RVP product at Rail Loading w/ VAC and VCU @ 2 mg/L, remaining 369 million gallons conventional gasoline or lower RVP product at Marine Loading w/ VAC and VCU @ 2 mg/L. Up to the total 1.9283 billion gallons of refined product throughput may be loaded at the marine rack, however the PEP scenario used maximizes throughput at the truck rack first to minimize the baseline emissions and therefore maximize the PEP.

3. N/A - Projected Emissions are lower than the Baseline Emissions (PEP is negative) and therefore PEP was N/A

4. Global Plans to paint the distillate storage tanks white which will result in a decrease in distillate storage emissions provided in this table. Tank emissions were calculated using current paint color.

5. The projected throughput for the IFR tanks includes both 1.929 billion gallons of gasoline distributed amongst the tanks to give them an equal number of turnovers, and 450 million gallons of crude distributed amongst the tanks to give them an equal number of turnovers. IFR emissions do not include landing and cleaning emissions. Baseline emissions also exclude landing and cleaning emissions.

6. Baseline distillate tank emissions only include standing losses.

7. Boiler emissions calculated in PTE. Emissions included are for the new boilers.

8. Alternative loading scenarios are also proposed as part of the application, however the alternative operating scenarios are designed to limit emissions to less than the primary loading scenarios included in the PEP. Additional information regarding the Alternative Operating Scenarios can be found in the Modification Application and PTE.

Project Emission Potential

A. EMISSIONS FROM MARINE LOADING OF BLENDSTOCK

Throughput:	380]			
Control Device Emission Rate:	2 mg/L		equal to:	0.0167	lbs/1000 gallons
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)	
c c	N/A	380	6,343	6,343	3.17

B. EMISSIONS FROM MARINE LOADING OF CONVENTIONAL GAS

Throughput:	369				
Control Device Emission Rate:	2 mg/L		equal to:	0.0167	lbs/1000 gallons
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)
-	N/A	369	6,159	6,159	3.08

C. EMISSIONS FROM TRUCK LOADING OF CONVENTIONAL GAS

Throughput:	879.3				
Control Device Emission Rate:	2 mg/L		equal to:	0.0167 lbs/1000 gallons	
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VRU	Total Emissions (lbs)	Total Emissions (tons)
	N/A	879	14 676	14 676	7 34

D. EMISSIONS FROM RAIL LOADING OF CONVENTIONAL GAS

Throughput:	300	Mmgal			
Control Device Emission Rate:	2	mg/L	equal to:	0.0167	lbs/1000 gallons
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)
	N/A	300	5.007	5.007	2.50

E. EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

Throughput:	450	Mmgal				
Control Device Emission Rate:	2	mg/L	equal to:	gual to: 0.0167 lbs/1000 gallons		
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	2 mg/L from VDU	Total Emissions (lbs)	Total Emissions (tons)	
-	N/A	450	7,511	7,511	3.76	

GLOBAL COMPANIES

PRODUCT TERMINAL EMISSION REPORT SIC CODE 5171

Albany

Report Purpose 2020 PTE

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EMISSION SUMMARY

EMISSION UNIT OVERVIEW

		VOC			HAP		LAR	GEST SINGLE HAP: He	exane
		Tank Landing			Tank Landing			Tank Landing	
Source Description	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Total Tank Emissions
	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
IFR Storage Tanks:				••			• •		
Tank 117	2.884	2,179	5.063	0.230	0.173	0.403	0.114	0.086	0.200
Tank 110	3 656	1 152	4 808	0.201	0.092	0.383	0 145	0.046	0.190
	3.000	1.152	4.808	0.251	0.092	0.365	0.143	0.040	0.190
	3.209	1.152	4.301	0.254	0.091	0.345	0.127	0.046	0.173
Tank 121	9.506	4.051	13.557	0.757	0.322	1.079	0.376	0.160	0.537
Tank 114	4.056	1.296	5.353	0.323	0.103	0.426	0.161	0.051	0.212
Tank 115	5.771	4.051	9.822	0.459	0.323	0.782	0.229	0.160	0.389
Tank 118	5.067	1.476	6.543	0.403	0.117	0.521	0.201	0.058	0.259
Tank 39	4 335	4 220	8 554	0.343	0 333	0.676	0 172	0 167	0.339
Tank 31	5 727	1 202	7 019	0.453	0 102	0.555	0.227	0.051	0.278
Tank 31	5.727	1.202	7.015	0.453	0.102	0.000	0.227	0.051	0.270
	5.727	1.292	7.019	0.455	0.102	0.555	0.227	0.051	0.278
	Occuline / Eth		Ossalina / Eth	Ossalina / Eth		Ossalina / 5th	Occaling / 5th		Ossalina / Eth
	Gasoline / Eth		Gasoline / Eth	Gasoline / Eth		Gasoline / Eth	Gasoline / Eth		Gasoline / Eth
	Loading		Loading	Loading		Loading	Loading		Loading
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions
	tpy		tpy	tpy		tpy	tpy		tpy
Gasoline / Ethanol Loading:				• •					
Truck Loading Fugitive	0.000		0.000	0 000		0.000	0 000		0.000
Truck Loading Plank	7 227		7 227	0.500		0.500	0.000		0.201
Truck Loading Stack	7.337		7.337	0.560		0.560	0.291		0.291
Rail Loading Fugitive	0.000		0.000	0.000		0.000	0.000		0.000
Rail Loading Stack	2.503		2.503	0.198		0.198	0.099		0.099
								Tank Landing	
	Tank Emissions	Emissions	Total Tank Emissions	Tank Emissions	Emissions	Emission	Tank Emissions	Emissions	Emission
	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
Distillate Storage Tanks:									
Tank 28	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0.000
Tank 29	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0,000
Tank 25	0.427		0.427	0.040	NIA	0.040	0.000	NIA	0.000
	0.427	INA NA	0.427	0.043	INA	0.043	0.000	INA	0.000
Tank 33	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	NA
Tank 30	0.427	NA	0.427	0.043	NA	0.043	0.000	NA	0.000
	Distillato		Distillato	Dictillato		Distillato	Dictillato		Distillato
	Distillate		Distillate	Distilate		Distillate	Distilate		Distillate
	Loading		Loading	Loading		Loading	Loading		Loading
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions
	tpy		tpy	tpy		tpy	tpy		tpy
Distillate Loading:									
Truck Loading	0.000		0.000	0.000		0.000	0.000		0.000
Truck Loading	0.000		0.000	0.000		0.000	0.000		0.000
Rail Loading	0.000		0.000	0.000		0.000	0.000		0.000
	Source		Sauraa	Course		Sauraa	Course		Source
	Source		Source	Source		Source	Source		Source
	Emissions		Emissions	Emissions		Emissions	Emissions		Emissions
	tpy		tpy	tpy		tpy	tpy		tpy
Product / Water Mixture Tank	0.000		0.000	0.000		0.000	0.000		0.000
Equipmont Eugitivos	2,660		2,660	0.500		0.500	0.000		0.206
Voca from Combust's Courses	2.000		2.000	0.040		0.540	0.200		0.200
vocs from Compustion Sources	7.660		7.660	0.511		0.511	0.303		0.303
VOCs from Engine Sources	0.029		0.029	0.002		0.002	0.001		0.001
Marine Loading	6.835		6.835	0.496		0.496	0.271		0.271
Additive Tank Emissions	0.072		0.072	0.072		0.072			
	0.072		0.072	0.072		0.072			1.02
TOTAL OF SOURCES			101.33			8.34			4.03
I otal VOCs	101.33	tons/yr							
Total HAPs	8.34	tons/yr							
Total Largest Single HAP	4 03	tons/vr							
	45,005,00	tono/yr							
I Otal GHG	45,825.22	ions/yi							
Total PM***	3.63	tons/yr							
Total SOx**	41.38	tons/yr							
Total NOx**	9.99	tons/yr							
	7 39	tons/vr							
	1.30	tonolyr							
	44,544.67	ions/yr							
Total TRS/H2S****	0.09	tons/yr							

NOTE: BLG refers to a gasoline blending scenario. ** From Page 19 & 20 - Combustion and Page 21 - Generators *** From Page 19 & 20 - Combustion and Page 21 - Generators and Page 26 & 30 - Fugitive Dust **** From Page 22 - H2S Calculations

EMISSION SUMMARY

		(Total HAP	Total HAP from	
Source Description	Benze	ene Ethylbenzene	Hexane	<u>HAP (lbs)</u> Isooctane	Toluene	Xylene (-m)	Naphthalene	Methanol*	this Page (lbs)	Landings (Next Page) (lbs)	Total HAP (lbs)
IFR Storage Tanks:			_			· ·		_			
Tank 117 Tank 110	27	8	228	36	50	39	3	68	459	347	806
Tank 119 Tank 120	34	10	290	46	64 56	49	4	86	582	183	766
Talik 120 Tank 121	20	9	204 753	40	50 165	43	3 10	224	507	645	2 157
Tank 114	37	20	321	51	70	55	4	96	646	206	852
Tank 115	53	16	457	73	100	78	6	136	919	645	1 564
Tank 118	47	14	401	64	88	68	5	120	807	235	1.042
Tank 39	35	12	343	54	75	58	4	102	685	667	1,352
Tank 31	46	16	454	72	100	77	6	135	905	204	1,109
Tank 32	46	16	454	72	100	77	6	135	905	204	1,109
Gasoline / Ethanol Loading: Truck Loading Fugitive Truck Loading Stack	0 60	0 20	0 581	0 92	0 127	0 99	0 8	0 173	0 1,160	0 0	0 1,160
Rail Loading Fugitive Rail Loading Stack	0 20	0 7	0 198	0 31	0 43	0 34	0 3	0 59	0 396	0 0	0 396
Distillate Storage Tanks:	0	2	0	0	20	10	0	10	05	0	05
Tank 28	2	3	0	0	20	49	0	10	85	0	85
Tarik 29 Tarik 64	2	3	0	0	20	49	0	10	85	0	85
Talik 04 Tank 33	2	3	0	0	20	49	0	10	00 85	0	60 85
Tank 30	2	3	0	0	20	49	0	10	85	ō	85
Distillate Loading: Truck Loading Rail Loading	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Product / Water Mixture Tank									0	0	0
Equipment Fugitives	59	61	412	127	219	218	1	0	1,096	0	1,096
VOCs from Combustion Sources	62	21	607	96	133	103	0	0	1,022	0	1,022
VOCs from Engine Sources	0	0	2	0	1	0	0	0	4	0	4
Marine Loading	59	19	541	86	119	92	3	73	991	0	991
Additive Tank Emissions	0	38	0	0	0	106	0	0	144 13 165	0	144 16 684
Total Individual HAP (Ibs/yr)	903	378	8,052	1,337	1,997	1,870	68	1,534	10,100	0,010	10,004
Total Individual HAP (tpy)	0.45	5 0.19	4.03	0.67	1.00	0.93	0.03	0.77	J		
TOTAL HAPS (lbs/yr) 1	6,684										
TOTAL HAPS (tpv)	8.34										

EMISSION UNIT HAP SPECIATION (HAP Emissions (lbs) = Total VOC Emissions (lbs) * HAP Vapor Fraction (%))

* Biodiesel Only

EMISSION SUMMARY

	(HAP Emission	ns (lbs) = Total VC	DC Emission	s (lbs) * HAP Va	por Fraction (%))			
Source Description	Benzene	Ethylbenzene	Hexane	<u>HAP (lbs)</u> Isooctane	Toluene	Xylene (-m)	Naphthalene	Methanol*	Total HAP from Landings (lbs)
IFR Storage Tanks: Tank 117 Tank 119 Tank 120 Tank 114 Tank 115 Tank 118 Tank 39 Tank 31 Tank 32	20 11 9 37 12 37 14 34 10 10	6 3 3 11 4 11 4 12 4 4 4	173 91 91 321 103 321 117 334 102 102	27 15 15 51 16 51 19 53 16 16 16	38 20 20 70 23 70 26 73 22 22 22	29 16 16 55 17 55 20 57 17 17 17	2 1 1 4 2 4 1 1	51 27 27 96 31 96 35 100 30 30 30	(IDS) - 347 183 182 645 206 645 235 667 204 204 204
I otal individual HAP (Ibs/yr)	195	61	1,755	2/8	385	298			3,519
Total Individual HAP (tpy)	0.10	0.03	0.88	0.14	0.19	0.15			1.76

TANK LANDING HAP SPECIATION

* Biodiesel Only

2020 PTE



NOTE: All distilate loading was assumed to be loaded at the truck rack as emissions from both truck and rail processes are the same (same emission factor is used for both calculations).

IFR Tanks:

Tank Emissions calculated using AP-42.

											N	VOCs from Tanks (lb/yr)		
Tk. No.	Dia	Leg ht	no land	land avg days	Vol bbls	Volume gals	Turnovers	Thruputs	gal/day	Tk No	Standing	V	/orking*	Total
117	110	4	2	2.0	65,315	2,743,229	87.	4 239,692,731	656,692	117		5097	672	5,769
119	80	4	2	2.0	34,147	1,434,161	101.	4 145,439,719	398,465	119		6781	530	7,311
120	80	4	2	2.0	34,068	1,430,858	72.	103,021,903	282,252	120		5988	430	6,418
121	150	4	2	2.0	121,554	5,105,286	109.	2 557,581,044	1,527,619	121		17955	1057	19,012
114	120	4	1	2.0	90,188	3,787,905	97.	1 367,729,496	1,007,478	114		7205	908	8,113
115	150	4	2	2.0	134,346	5,642,527	88.	501,262,444	1,373,322	115		10517	1024	11,541
118	100	4	2	2.0	52,872	2,220,637	91.	202,066,061	553,606	118		9,521	613	10,135
39	125	4	3	2.0	73,176	3,073,373	72.	221,283,128	606,255	39		8,078	591	8,669
31	125	4	2	2.0	90,520	3,801,825	72.	273,731,737	749,950	31		10,658	795	11,453
32	125	4	2	2.0	90,520	3,801,825	72.	273,731,737	749,950	32		10,658	795	11,453
						33,041,626	-	2,885,540,000						99,874
					_		Average Turnover	s 87.3						
							Total IFR Tank Throughpu	t 2,885,540,000		* Working lo	sses include worki	ing losses from gasoline, I	olendstocł	k, and crude

* Working losses include working losses from gasoline, blendstock, and crude throughput. See following page for details.

Distillate Tanks: STANDING LOSSES ONLY

Tank Emissions calculated using AP-42.

		8								
					Actual		Calculated			
Tk. No.	Dia		vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	_	Tk No
28	125		91,170	3,829,140		0.0	0	0	,	28
29	125		91,170	3,829,140		0.0	0	0	,	29
64	125		87,870	3,690,540		0.0	0	0	,	64
33	125		91,170	3,829,140		0.0	0	0	ł	33
30	125		91,170	3,829,140		0.0	0	0	,	30
				19,007,100	-		-		-	
			•		Averag	ge Turnovers	-			
						-		-		

Additive Tanks

Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.

				Actual		Calculated			VOCs from Tanks (lb/yr)		
Tk. No.	Dia	vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	Tk No	Standing N	orking	Total
A-1		257	10,800		13.3	143,396.60	393	A-1	16	23	39
A-4		172	7,221		13.3	95,876.56	263	A-4	11	15	26
A-5		21	900		13.3	11,949.72	33	A-5	1	2	3
A-6		11	450		13.3	5,974.86	16	A-6	1	1	2
A-Generic		172	7,221		13.3	95,876.56	263	A-Generic	11	15	26
A-Exxon		85	3,554		13.3	47,188.10	129	A-Exxon	6	8	13
SA		175	7,366		13.3	97,801.79	268	SA	11	14	25
A-Red Dye		6	248		13.3	3,292.81	9	A-Red Dye	1	1	1
A-Red Dye 2		11	450		13.3	5,974.86	16	A-Red Dye 2	1	1	2
WHFO		6	250		13.3	3,319.37	9	WHFO	1	1	1
D-Fire Pump		6	250		13.3	3,319.37	9	D-Fire Pump	1	1	1
R-Fire Pump		3	125		13.3	1,659.68	5	R-Fire Pump	0	0	1
GAFO		21	900		13.3	11,949.72	33	GAFO	1	2	3
			39,735	0	Total Additive	527,580					144

Product Water/Mixture tanks

Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.

		-			Actual		Calculated				VOCs from Tanks (lb.	/yr)	
Tk. No.	Dia		vol bbls	Volume gals	Thruputs	Turnovers	Thruputs	gal/day	_	Tk No	Standing	Working	Total
65	92		39,072	1,641,015		-				65			-
130	75		33,854	1,421,868		-				130			-
		-								<u>.</u>			

	VOCs from Tanks (lb/yr)	
Standing	Working	Total
	854	854
	854	854
	854	854
	854	854
	854	854

4,270.6

IFR Tank No.	Tanks Volume (gal)	Throughput (gal/yr)	Turnovers
117	2,743,229	160,152,189	58.38
118	2,220,637	129,642,796	58.38
119	1,434,161	83,727,616	58.38
120	1,430,858	83,534,784	58.38
121	5,105,286	298,051,213	58.38
114	3,787,905	221,141,319	58.38
115	5,642,527	329,415,828	58.38
31	3,801,825	221,953,981	58.38
32	3,801,825	221,953,981	58.38
39	3,073,373	179,426,294	58.38
Total:	33,041,626	1,929,000,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)	
2.25	0.14	4501	275	2.39	4776	
4.20	0.12	8408	245	4.33	8652	
2.99	0.10	5988	197	3.09	6185	
2.99	0.10	5988	197	3.09	6185	
7.47	0.19	14938	375	7.66	15313	
3.00	0.17	5994	348	3.17	6342	
4.38	0.21	8750	414	4.58	9164	
5.33	0.18	10658	364	5.51	11022	
5.33	0.18	10658	364	5.51	11022	
4.04	0.14	8078	271	4.17	8349	

Total Permitted Distillate Storage:	1,929,000,000	gallons/yr	
	Tanks		
VFR	Volume	Throughput (gal/yr)	Turnovers
Tank No.	(gal)		
28	3,829,140	389,172,536	101.63
29	3,829,140	389,172,536	101.63
64	3,690,540	375,086,001	101.63
33	3,801,825	386,396,391	101.63
30	3,829,140	389,172,536	101.63
Total:	18,979,785	1,929,000,000	

	Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)	
ſ	0.43	0.40	854	797	0.83	1651	
	0.43	0.40	854	797	0.83	1651	
	0.43	0.38	854	768	0.81	1622	
ſ	0.43	0.40	854	797	0.83	1651	
ſ	0.43	0.40	854	797	0.83	1651	

Total Permitted Crude Storage:	450,000,000	gallons/yr	
	Tanks		
IFR	Volume	Throughput (gal/yr)	Turnovers
Tank No.	(gal)		
117	2,743,229	37,360,542	13.62
118	2,220,637	30,243,265	13.62
119	1,434,161	19,532,103	13.62
120	1,430,858	19,487,119	13.62
121	5,105,286	69,529,832	13.62
114	3,787,905	51,588,177	13.62
115	5,642,527	76,846,616	13.62
31	3,801,825	51,777,756	13.62
32	3,801,825	51,777,756	13.62
39	3,073,373	41,856,834	13.62
Total:	33,041,626	450,000,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
1.29	0.16	2576	325	1.45	2901
2.41	0.14	4811	289	2.55	5101
1.71	0.12	3427	234	1.83	3660
1.71	0.12	3427	233	1.83	3660
4.27	0.22	8548	443	4.50	8992
1.72	0.21	3430	411	1.92	3841
2.50	0.25	5007	490	2.75	5497
3.05	0.22	6099	431	3.26	6530
3.05	0.22	6099	431	3.26	6530
2.31	0.16	4623	320	2.47	4943

otal.	33,041,020	

Total Permitted Blendstock Storage*: 506,540,000 gallons/yr *Includes permitted blendstock throughput of 380,000,000 gallons and tank-to-tank transfers. These throughputs were permitted as part of the 2011 Blending Project.

IFR Tank No.	Tanks Volume (gal)	Throughput (gal/yr)	Turnovers
117	2,743,229	42,180,000	15.38
118	2,220,637	42,180,000	18.99
119	1,434,161	42,180,000	29.41
120	1,430,858	0	0.00
121	5,105,286	190,000,000	37.22
114	3,787,905	95,000,000	25.08
115	5,642,527	95,000,000	16.84
31	3,801,825	0	0.00
32	3,801,825	0	0.00
39	3,073,373	0	0.00
Tota	al: 33,041,626	506,540,000	

Standing (tons)	Working (tons)	Standing (lbs)	Working (Ibs)	Total Emissions (tons)	Total Emissions (lbs)
2.55	0.04	5097	72	2.58	5169
4.76	0.04	9521	80	4.80	9601
3.39	0.05	6781	99	3.44	6880
0.00	0.00	0	0	0.00	0
8.98	0.12	17955	239	9.10	18194
3.60	0.07	7205	149	3.68	7354
5.26	0.06	10517	119	5.32	10637
0.00	0.00	0	0	0.00	0
0.00	0.00	0	0	0.00	0
0.00	0.00	0	0	0.00	0

Total PTE Emissions:

	Total Standing*	Total Working**
117	2.55	0.34
118	4.76	0.31
119	3.39	0.27
120	2.99	0.21
121	8.98	0.53
114	3.60	0.45
115	5.26	0.51

31	5.33	0.40
32	5.33	0.40
39	4.04	0.30
28	0.43	**
29	0.43	**
64	0.43	**
33	0.43	**
30	0.43	**

* Max standing loss scenario when looking at gasoline, crude, and blendstock storage for IFR storage tanks. Distillate standing losses for VFR storage tanks.

** Sum of working losses from storage of gasoline, crude, and blendstock storage for IFR storage tanks. Zero working losses are assumed for VFR storage tanks, as total refined product throughput was conservatively assumed to be gasoline.

	117	119	120	121	114	115	118	39	31	32	-	Total Thruput	_	
Thruput	-	-	-	-	-	-	-	-	-	-	-	_	gal/yr	
Thruput	239,692,731	145,439,719	103,021,903	557,581,044	367,729,496	501,262,444	202,066,061	221,283,128	273,731,737	273,731,737	-	2,885,540,000	gal/yr	
Throughput (Bbl / Yr):	5,706,970	3,462,850	2,452,902	13,275,739	8,755,464	11,934,820	4,811,097	5,268,646	6,517,422	6,517,422	-	68,703,333	bbl/yr	
	Lb / Year	Lb / Year	Tons /Year											
Total VOC***	5,769	7,311	6,418	19,012	8,113	11,541	10,135	8,669	11,453	11,453	-		99,874	49.94
Benzene	27	34	26	87	37	53	47	35	46	46	-		439	0.22
Ethylbenzene	8	10	9	26	11	16	14	12	16	16	-		137	0.07
Hexane	228	290	254	753	321	457	401	343	454	454	-		3,955	1.98
Isooctane	36	46	40	120	51	73	64	54	72	72	-		628	0.31
Toluene	50	64	56	165	70	100	88	75	100	100	-		868	0.43
Xylene (-m)	39	49	43	128	55	78	68	58	77	77	-		672	0.34
Naphthalene	3	4	3	10	4	6	5	4	6	6	-		52	0.03
Methanol	68	86	76	224	96	136	120	102	135	135	-		1,179	0.59
Total HAP Species	459	582	507	1,514	646	919	807	685	905	905	-		7,929	3.96
Non Hap VOC	5,309	6,729	5,911	17,498	7,467	10,622	9,328	7,984	10,548	10,548	-		91,945	45.97
Total VOC:	5,769	7,311	6,418	19,012	8,113	11,541	10,135	8,669	11,453	11,453	-		99,874	49.94
Total HAP	459	582	507	1,514	646	919	807	685	905	905	-		7,929	3.96
LARGEST SINGLE HAP: Hexane	228	290	254	753	321	457	401	343	454	454	-			

NOTE: Total working losses from tanks permited to store blendstock are conservatively speciated as if they are entirely blendstock, even though they contain working losses from gasoline, ethanol, and crude.

*** Tank Emissions calculated using AP-42.

	28	29	64	33	30						Total Thruput	_	
Thruput	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Thruput	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Throughput (Bbl / Yr):	-	-	-	-	-	-	-	-	-	-	-	bbl/yr	
	Lb / Year	Lb / Year	Lb / Year	Lb / Year	Lb / Year							Lb / Year	Tons /Year
Total VOC*	854	854	854	854	854	-	-	-	-	-		4,271	2.14
Benzene	1.8	1.8	1.8	1.8	1.8	-	-	-	-	-		9	0.00
Ethylbenzene	2.7	2.7	2.7	2.7	2.7	-	-	-	-	-		13	0.01
Hexane	0.4	0.4	0.4	0.4	0.4							2	0.00
Isooctane	-	-	-	-	-							_	-
Toluene	20.4	20.4	20.4	20.4	20.4	-	-	-	-	-		102	0.05
Xylene (-m)	49.3	49.3	49.3	49.3	49.3	-	-	-	-	-		247	0.12
Naphthalene	0.4	0.4	0.4	0.4	0.4	-	-	-	-	-		2	0.00
Methanol	10.1	10.1	10.1	10.1	10.1	-	-	-	-	-		50	0.03
Total HAP Species	85	85	85	85	85	-	-	-	-	-		426	0.21
Non Hap VOC	769	769	769	769	769	-	-	-	-	-		3,845	1.92
Total VOC:	854	854	854	854	854	-						4,271	2.14
Total HAP:	85	85	85	85	85	-	-	-	-	_		426	0.21
LARGEST SINGLE HAP: Xylene (-m)	49.33	49.33	49.33	49.33	49.33	-	-	-		_		247	0.12

* Tank Emissions calculated using AP-42.

Additive Tank Speciation

	A-1	A-4	A-5	A-6	A-Generic	A-Exxon	SA	A-Red Dye	A-Red Dye 2	WHFO	D-Fire Pump	R-Fire Pump	GAFO	Total	_	
Thruput	-	-	-	-	-	-	-	-	-	-	-	-	-	-	gal/yr	
Thruput	143,397	95,877	11,950	5,975	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	95,877	1,120,087	gal/yr	
Throughput (Bbl / Yr):	3,414	2,283	285	142	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	2,283	26,669	bbl/yr	
	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year	lb/year		lb/year	tons/year
Total VOC*	39	26	3	2	26	13	25	1	2	1	1	1	3		144.16	0.07
Benzene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Ethylbenzene	10.4	6.9	0.9	0.4	6.9	3.6	6.5	0.3	0.4	0.4	0.3	0.2	0.9		38.16	0.02
Hexane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A		-	-
Isooctane	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Toluene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Xylene (-m)	28.8	19.3	2.4	1.2	19.3	9.9	18.2	0.9	1.2	1.1	0.9	0.5	2.4		106.00	0.05
Naphthalene	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N/A	N / A	N / A		-	-
Methanol	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N/A	N / A	N / A	N / A	N / A	N / A		-	-
Total HAP Species	39	26	3	2	26	13	25	1	2	1	1	1	3		144	0.07
Non Hap VOC	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-

* Tank Emissions calculated using EPA TANKS Emissions Estimation Software, Version 4.09D.
| | | Truck Loading | | |
|-------------------|----------|---------------|--------|--|
| | Gasoline | Distillate | Total | |
| | | | | |
| Total VOC lb/yr | 14,674 | 0 | 14,674 | |
| Benzene | 60 | 0 | 60 | |
| Ethylbenzene | 20 | 0 | 20 | |
| Hexane (-n) | 581 | - | 581 | |
| Iso-octane | 92 | - | 92 | |
| Toluene | 127 | 0 | 127 | |
| Xylene (-m) | 99 | 0 | 99 | |
| Naphthalene | 8 | 0 | 8 | |
| Methanol** | 173 | - | 173 | |
| Total HAP Species | 1,160 | 0 | 1,160 | |
| Non Hap VOC | 13,515 | 0 | 13,515 | |

	Rail Loading	
Gas / Eth	Distillate*	Total
5,007	0	5,007
20	0	20
7	0	7
198	-	198
31	-	31
43	0	43
34	0	34
3	0	3
59	0	59
396	0	396
4,611	0	4,611

Marine Loading								
Crude Oil	Gas / Eth	Total						
7,511	6,159	13,670						
30	28	59						
10	8	19						
297	244	541						
47	39	86						
65	54	119						
51	41	92						
-	3	3						
-	73	73						
501	490	991						
7,010	5,669	12,678						

* Distillate Rail Loading Emissions are captured in Distillate Truck Loading.

** Biodiesel Only

То	tal
lb/yr	Tons/yr
33,351	16.68
139	0.07
46	0.02
1,321	0.66
209	0.10
290	0.14
225	0.11
13	0.01
305	0.15
2,547	1.27
30,804	15.40

TRUCK LOADING OF GASOLINE

				Loading Lo	sses 2mg/l	Tank-truck I	oss 0 mg/l*	Tota	al
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	879.3	Total VOC	100.00%	14,674	7.337	-	-	14,674	7.337
		Benzene	0.41%	60	0.030	0	-	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	20	0.010	0	-	20	0.010
(VRU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	581	0.291	0	-	581	0.291
manufacturer of the VRU and verified with a Performance Stack Test every 5 years.)		Iso-octane	0.63%	92	0.046	0	-	92	0.046
		Toluene	0.87%	127	0.064	0	-	127	0.064
		Xylene (-m)	0.67%	99	0.049	0	_	99	0.049
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	8	0.004	0	-	8	0.004
		Methanol	1.18%	173	0.087	0	-	173	0.087
Controlled gasoline Loading Losses (lb/yr)	14,674	Total HAP Species*	7.90%	1,160	0.580	-	-	1,160	0.580
		Non Hap VOC	92.10%	13,515	6.757	-	-	13,515	6.757
		Total V	OC	14,674	7.337	-	-	14,674	7.337
		Total H	AP	1,160	0.580	-	-	1,160	0.580
		Largest Single HAP							
		Hexane (-n)		581	0.291	-	-	581	0.291

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

TRUCK LOADING OF	GASOLINE - ALTERNATIVE OPERATING SCENARIO
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				Loading Lo	sses 2mg/l	Tank-truck loss 8 mg/l		Tot	al
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rack (MM gal)	176.0	Total VOC	100.00%	2,937	1.469	11,749	5.874	14,686	7.343
		Benzene	0.41%	12	0.006	48	0.024	60	0.030
VRU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	4	0.002	16	0.008	20	0.010
(VRU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	116	0.058	465	0.233	582	0.291
manufacturer of the VRU and verified with a		lso-octane	0.63%	18	0.009	73	0.037	92	0.046
Performance Stack Test every 5 years.)		Toluene	0.87%	26	0.013	102	0.051	128	0.064
		Xylene (-m)	0.67%	20	0.010	79	0.040	99	0.049
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	2	0.001	6	0.003	8	0.004
		Methanol	1.18%	35	0.017	139	0.069	173	0.087
Controlled gasoline Loading Losses (lb/yr)	2,937	Total HAP Species*	7.90%	232	0.116	928	0.464	1,161	0.580
		Non Hap VOC	92.10%	2,705	1.353	10,820	5.410	13,526	6.763
		Total VOC)	2,937	1.469	11,749	5.874	14,686	7.343
		Total HAF	0	232	0.116	928	0.464	1,161	0.580
		Largest Single HAP							
		Hexane (-n)		116	0.058	465	0.233	582	0.291

		Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	То	tal
	Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Total VOC	100.00%	2,937	1.469	11,749	5.874	14,686	7.343
Benzene	0.41%	12	0.006	48	0.024	60	0.030
Ethylbenzene	0.14%	4	0.002	16	0.008	20	0.010
Hexane (-n)	3.96%	116	0.058	465	0.233	582	0.291
lso-octane	0.63%	18	0.009	73	0.037	92	0.046
Toluene	0.87%	26	0.013	102	0.051	128	0.064
Xylene (-m)	0.67%	20	0.010	79	0.040	99	0.049
Naphthalene	0.05%	2	0.001	6	0.003	8	0.004
Methanol	1.18%	35	0.017	139	0.069	173	0.087
Total HAP Species*	7.90%	232	0.116	928	0.464	1,161	0.580
Non Hap VOC	92.10%	2,705	1.353	10,820	5.410	13,526	6.763
Total VOC		2,937	1.469	11,749	5.874	14,686	7.343
Total HAP		232	0.116	928	0.464	1,161	0.580
Largest Single HAP							
Hexane (-n)		116	0.058	465	0.233	582	0.291

Sample Calculation:

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 650,000,000 gal * 3.785 L/gal * 2 mg/L * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 10,848 lbs = Emissions (lbs)

				Loading	Losses	Fugitive Er	missions*
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Distillate Throughput at the Rack (MM gal)	-	Total VOC	100.00%	0.0	-	0.0	-
		Benzene	0.22%	0.0	-	0.0	-
		Ethylbenzene	0.31%	0.0	-	0.0	_
		Hexane (-n)	0.00%	0.0	-	0.0	-
Uncontrolled Loading Emission Factor (mg/l)	1.7	Iso-octane	0.00%	0.0	-	0.0	_
(AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Table 5.2-5.)		Toluene	2.39%	0.0	-	0.0	-
		Xylene (-m)	5.78%	0.0	-	0.0	-
		Naphthalene	0.05%	0.0	-	0.0	-
Distillate Loading Rack Loss (Ib/year)	-	Methanol	1.18%	0.0	-	0.0	-
		Total HAP Species*	9.92%	0.0	-	0.0	-
		Non Hap VOC	90.08%	0.0	-	0.0	-
		Total V	C	0.0	0.0	0.0	0.0
		Total H	٩P	0.0	0.0	0.0	0.0
		Largest Single HAP					
		Xylene (-m)		_		_	_

* Fugitives are included in the Uncontrolled Loading Emission Factor and are calculated with the loading emissions.

Sample Calculations

Volume of distillate bottom loaded (gallons) * 3.785 litres/gallon * 1.7 mg/liter of distillate loaded * 2.2046 lbs/kg * 1 kg / 1,000,000 = Emissions (lbs) 229,300,000 gallons * 3.785 L/gal * 1.7 mg/L * 2.2046 * 1kg / 1,000,000 = Emissions (lbs) 3,253 lbs = Emissions (lbs)

RAIL LOADING OF GASOLINE

				Loading Lo	sses 2mg/l	Tank-truck loss 8 mg/l		Tot	tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	300.0	Total VOC	100.00%	5,007	2.503	-	-	5,007	2.503
		Benzene	0.41%	20	0.010	0	-	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	7	0.003	0	-	7	0.003
(VCU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	198	0.099	0	-	198	0.099
manufacturer of the VCU and verified with a		lso-octane	0.63%	31	0.016	0	-	31	0.016
Performance Stack Test every 5 years.)		Toluene	0.87%	43	0.022	0	-	43	0.022
		Xylene (-m)	0.67%	34	0.017	0	-	34	0.017
Tank-Truck Loss Factor (mg/liter)	0*	Naphthalene	0.05%	3	0.001	0	-	3	0.001
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	59	0.030	0	-	59	0.030
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	396	0.198	-	-	396	0.198
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	4,611	2.306	-	-	4,611	2.306
Table 5.2-5), multiplied by the leakage rate of 0.8%									
(AP-42, Compilation of Air Pollutant Emission		Total VC	C	5,007	2.503	-	-	5,007	2.503
Factors, 501 Ed. , 501 H		Total H	AP	396	0.198	-	-	396	0.198
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	5,007	Hexane (-n)		198	0.099	-	-	198	0.099

* Tank-truck Loss Factor is 0 mg/L as a result of a Vacuum Assist System installed at the Truck Loading Rack.

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

			I	Loading Lo	sses 2mg/l	Tank-truck	loss 8 mg/l	To	tal
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Gasoline Throughput at the Rail (MM gal)	60.0	Total VOC	100.00%	1,001	0.501	4,005	2.003	5,007	2.503
		Benzene	0.41%	4	0.002	16	0.008	20	0.010
VCU Emission Rating (mg/liter)	2	Ethylbenzene	0.14%	1	0.001	6	0.003	7	0.003
(VCU Emission Rating is guaranteed by the		Hexane (-n)	3.96%	40	0.020	159	0.079	198	0.099
manufacturer of the VCU and verified with a Performance Stack Test every 5 years.)		Iso-octane	0.63%	6	0.003	25	0.013	31	0.016
		Toluene	0.87%	9	0.004	35	0.017	43	0.022
		Xylene (-m)	0.67%	7	0.003	27	0.013	34	0.017
Tank-Truck Loss Factor (mg/liter)	8	Naphthalene	0.05%	1	0.000	35	0.017	35	0.018
(EPA Approved Factor, Submerged Loading		Methanol	1.18%	12	0.006	27	0.013	39	0.019
emission factor of 980 mg/L (AP-42, Compilation		Total HAP Species*	7.90%	79	0.040	329	0.164	408	0.204
of Air Pollutant Emission Factors, 5th Ed., Vol. I,		Non Hap VOC	92.10%	922	0.461	3,676	1.838	4,599	2.299
Table 5.2-5), multiplied by the leakage rate of 0.8%									
(AP-42, Compilation of Air Pollutant Emission		Total V	C	1,001	0.501	4,005	2.003	5,007	2.503
Factors, 501 ± 0.1 , vol. 1))		Total H	AP	79	0.040	329	0.164	408	0.204
		Largest Single HAP							
Controlled gasoline Loading Losses (lb/yr)	1,001	Hexane (-n)		40	0.020	159	0.079	198	0.099

RAIL LOADING OF GASOLINE - ALTERNATIVE OPERATING SCENARIO

Sample Calculations

Volume Of Gasoline Loaded (gallons)*3.785 litres/gallon*Overall Emission Rate (mg/liter)*2.2046 lbs/Kg*1 Kg / 1,000,000 mg = Emissions (lbs) 150,000,000 gal * 3.785 L/gal * (10 mg/L + 8 mg/L) * 2.2046 lbs/Kg * 1 Kg / 1,000,000 mg = Emissions (lbs) 22,530 lbs = Emissions (lbs)

				Loading Losses		Fugitive	Emissions
			Vapor Fraction	Lbs/Year	Tons/Yr.	Lbs/Year	Tons/Yr.
Distillate Throughput at the Rail (MM gal)	-	Total VOC	100.00%	0.0		0.0	-
Distillate Rail Loading Emissions are included with the Distillate Truck Loading emissions.		Benzene	0.22%	0.0	-	0.0	-
		Ethylbenzene	0.31%	0.0	-	0.0	-
		Hexane (-n)	0.00%	0.0	-	0.0	-
Uncontrolled Bottom Loading Emission Factor (mg/l)	1.70	Iso-octane	0.00%	0.0	-	0.0	-
(AP-42, Compilation of Air Pollutant Emission Factors, Fifth		Toluene	2.39%	0.0	-	0.0	-
Edition, Volume I, Table 5.2-5.)		Xylene (-m)	5.78%	0.0	-	0.0	-
		Naphthalene	0.05%	0.0	-	0.0	-
Distillate Loading Rack Loss (lb/year)	-	Methanol	1.18%	0.0	-	0.0	-
		Total HAP Species*	9.92%	0.0	-	0.0	-
		Non Hap VOC	90.08%	0.0	-	0.0	-
		Total VOC		0.0	0.0	0.0	0.0
		Total HAP		0.0	0.0	0.0	0.0
		Largest Single HAP					
		NA		-		-	-

Sample Calculations

Volume of distillate bottom loaded (gallons) * 3.785 litres/gallon * 1.7 mg/liter of distillate loaded * 2.2046 lbs/kg * 1 kg / 1,000,000 = Emissions (lbs) 0 gallons * 3.785 L/gal * 1.7 mg/L * 2.2046 * 1kg / 1,000,000 = Emissions (lbs) 0 lbs = Emissions (lbs)

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

Throughput:

Control Device Emission Rate:

0.0167 lbs/1000 gallons 2 mg/L equal to: Loading Rack 0% Remaining Throughput after 100% **Emission Factor*** Emissions 2 mg/ goes to VCU 100% to VCU from V (lb/1000 gal) (lb/yr) (Mmgal) 3.9000 369 1,439,100 0 1,439,100 6,15

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

369 Mmgal

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

Emission Factor*	Throughput	Loading Rack Emissions (lb/br)	0% Remaining after 100%	100% to VCU	2 mg/L	Total Emissions (lbs/br)	Total Emissions
	(ivingal)		900010100				(10110/111)
3.9000	1.05	4095	0	4095	82	82	0.04

/L ′CU	Total Emissions (lbs)	Total Emissions (tons)
9	6,159	3.08

EMISSIONS FROM MARINE LOADING OF GAS/ETH: ALTERNATIVE OPERATING SCENARIO

299 Mmgal

Throughput:

Control Device Emission Rate:

0.0167 lbs/1000 gallons 2 mg/L equal to: 0.1% Fugitive Loading Rack Emission after Throughput 99.9% goes to Emission Factor* Emissions 99.9% to 2 mg/ (lb/yr) VCU VCU (lb/1000 gal) from V (Mmgal)

1,165,671

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

3.9000

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

			0.1% Fugitive				
		Loading Rack	Emission after			Total	
Emission Factor*	Throughput	Emissions	99.9% goes to	99.9% to	2 mg/L	Emissions	Total Emissions
(lb/1000 gal)	(Mmgal)	(lb/hr)	VCU	VCU	from VCU	(lbs/hr)	(tons/hr)
3.9000	1.05	4095	4	4095	18	22	0.01

1,166

1,164,505

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

299

2 mg/L om VCU	Total Emissions (lbs)	Total Emissions (tons)
4,989	6,154	3.08

EMISSIONS FROM MARINE LOADING OF GAS/ETH:

Throughput:

Control Device Emission Rate:

0.0835 lbs/1000 gallons 10 mg/L equal to: Loading Rack 0% Remaining Throughput after 100% Emission Factor* Emissions 2 mg/ goes to VCU 100% to VCU from V (lb/1000 gal) (lb/yr) (Mmgal) 3.9000 74 287,820 0 287,820 6,15

Loading into an Uncleaned Barge:

* Emission Factor from Table 5.2-2 in AP-42 for an Uncleaned Barge previously loaded with a Volatile Liquid

74 Mmgal

Max Emissions Per Hour:

4,000 barrels / hr 168,000 gal / hr

Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/hr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs/hr)	Total Emissions (tons/hr)
3.9000	0.17	655	0	655	14	14	0.01

/L ′CU	Total Emissions (lbs)	Total Emissions (tons)
9	6,159	3.08

EMISSIONS FROM MARINE LOADING OF CRUDE OIL:

Throughput:	450	Mmgal						
Control Device Emission Rate:	2	mg/L	equal to:	0.0167 lbs/1000 gallons				
Loading into an Uncleaned Barge:	Emission Factor* (lb/1000 gal)	Throughput (Mmgal)	Loading Rack Emissions (lb/yr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs)	Total Emissions (tons)
	1.7996	450	809,804	0	809,804	7,511	7,511	3.76

* Emission Factor calculated below, per AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Section 5.2, Equation 2.

Max Emissions Per Hour:

25,000 barrels / hr 1,050,000 gal / hr

	Emission Factor (lb/1000 gal)	actor Throughput al) (Mmgal)		Load Em (I	ing Rack issions b/hr)	0% Remaining after 100% goes to VCU	100% to VCU	2 mg/L from VCU	Total Emissions (lbs/hr)	Total Emissions (tons/hr)
	1.7996	1	.05	1	890	0	1890	18	18	0.01
Emission Factor Calculation from AP-42:			CL = Ca + 1.80 0.86			Cg 0.94	where: CL = Total loading loss, lb/1,000 Ca = Arrival emission factor (fr			b/1,000 gal of crude of crude of crude of crude of the second state
Cg Formula Inputs: Va	Vapor Pressure Molecular Weight por Growth Factor Temperature *R		12.5 50 1.02 507.37	(from (from (from (from	n EPA Tan n EPA Tan n AP-42) n EPA Tan	ks 4.09d) ks 4.09d) ks 4.09d)		contributed by vapors in the empty tan compartment before loading, lb/1,000 oil loaded. Cg = Calculated emission factor (from E contributed by evaporation during load lb/1,000 gal loaded.		

NOTE: Loading emission calculations were performed in accordance with guidance in AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I.

oil loaded. -3), fcrude

on 3),

Facility Fugitives

Fugitive VOC Emissions

Ex	cisting Cour	nt*		Light	Heavy	Gas				
Light	Heavy	Gas		Factor (lbs/hr)	Factor (lbs/hr)	Factor (lbs/hr)	Lbs/Hr	Lbs/Year	lb/day	tpy
1,297	243	238	Valves	9.48E-05	9.48E-05	2.87E-05	0.15	1.3E+03	3.67	0.67
10	3	2	Pumps	1.19E-03	1.19E-03	1.43E-04	0.02	1.4E+02	0.38	0.07
123	28	58	Other	2.87E-04	2.87E-04	2.65E-04	0.06	5.1E+02	1.41	0.26
5,809	1,274	879	Flanges	1.76E-05	1.76E-05	9.26E-05	0.21	1.8E+03	4.95	0.90
*Includes	Gas Blendi	ing Project	, Butane Minor Mod, 20	012 Crude Project, and	Truck Rack Mind	or Mod	0.43	3797.49	10.40	1.90
Pr	oject Coun	t**		Light	Heavy	Gas				
Light	, Heavy	Gas		Factor (lbs/hr)	Factor (lbs/hr)	Factor (lbs/hr)	Lbs/Hr	Lbs/Year	lb/day	tpy
200	28	150	Valves	9.48E-05	9.48E-05	2.87E-05	0.03	2.3E+02	0.62	0.11
27	28	4	Pumps	1.19E-03	1.19E-03	1.43E-04	0.07	5.8E+02	1.59	0.29
10	28	58	Other	2.87E-04	2.87E-04	2.65E-04	0.03	2.3E+02	0.63	0.11
500	28	500	Flanges	1.76E-05	1.76E-05	9.26E-05	0.06	4.9E+02	1.33	0.24
**Includes	Current P	roject ONL	Y				0.17	1522.54	4.17	0.76
-	Total Coup	+		Light	Норм	Gas				
Light		Gas		Light Eactor (lbs/br)	Factor (lbs/br)	Gas Eactor (lbs/br)	l bc/Ur	l.bs/Voor	lb/day	tov
1 407	⊓eavy 271	GdS 200					LDS/FII		10/uay	ιμy 0.79
1,497	211	500	Dumps	9.40E-03	9.48E-03	2.07 E-03	0.10	7.2⊑±02	4.29	0.70
122	56	116	Othor	1.19E-03	2.875.04	2.655.04	0.08	7.20+02	2.04	0.30
6 300	1 302	1 370	Flanges	2.07E-04	2.87E-04	2.03E-04	0.08	7.4E±02	6.20	1 15
0,309	1,302	1,379	Flanges	1.70E-05	1.70E-05	9.202-03	0.20	2.3E+03 5320.04	14.58	2.66
			Light Liquid	Light Liquid	Heavy Liquid	Heavy Liquid	Gas	Gas	Total	Total
			Fraction	Lbs/Year	Fraction	Lbs/Year	Fraction	Lbs/Year	Lbs/Year	tpy
Total VOC)		100.00%	2937.65	100.00%	890.08	100.00%	1492.30	5320.04	2.66
Benze	ene		1.80%	52.88	0.001%	0.01	0.41%	6.05	58.94	0.03
Ethylb	enzene		2.00%	58.75	0.01%	0.12	0.14%	2.05	60.92	0.03
Hexan	ne		12.00%	352.52	N/A	N/A	3.96%	59.10	411.61	0.21
Isooct	ane		4.00%	117.51	N/A	N/A	0.63%	9.34	126.84	0.06
Toluer	ne		7.00%	205.64	0.03%	0.28	0.87%	12.97	218.89	0.11
Xylene	e (-m)		7.00%	205.64	0.29%	2.58	0.67%	10.05	218.26	0.11
Napht	halene		N/A	N/A	0.10%	0.89	N/A	N/A	0.89	0.00
Metha	inol*		N/A	N/A	0.00%	0.00	N/A	N/A	0.00	0.00
Total HAP	PS		33.80%	992.93	0.44%	3.88	6.67%	99.55	1096.35	0.55
Non Hap	VOC		66.20%	1944.73	99.56%	886.21	93.33%	1392.75	4223.68	2.11

NOTE: Based on facility-specific equipment component counts. Emissions calculated per EPA guidance "Protocol for Equipment Leak Emission Estimates" (USEPA, November 1995).

HAP data

	Worst Case	VAPOR FRA	ACTION		LIQUID FRACTION (wt%) Worst Case					
HAP	Refined Product	Blending	Distillate	Additive	Refined Product	Blending	Distillate	Additive		
Benzene	0.41%	0.46%	0.2157%	-	1.80%	2.00%	0.0008%	-		
Ethylbenzene	0.14%	0.14%	0.3114%	26.47%	2.00%	2.00%	0.0130%	23.00%		
Hexane	3.96%	3.96%	0.0449%	-	12.00%	12.00%	0.0001%	-		
Isooctane	0.63%	0.63%	-	-	4.00%	4.00%	-	-		
Toluene	0.87%	0.87%	2.3887%	-	7.00%	7.00%	0.0320%	-		
Xylene (-m)	0.67%	0.67%	5.7760%	73.53%	7.00%	7.00%	0.2900%	77.00%		
Naphthalene	0.0516%	0.0516%	0.0516%	-	0.1000%	0.1000%	0.1000%	-		
Methanol*	1.18%	0.00%	1.18%	-	2.00%	0.00%	2.00%	-		

*Biofuels only

		Tank Numbers										
	117	119	120	121	114	115	118	39	31	32		
Tank Diameter (ft)	110	80	80	150	120	150	100	125	125	125		
Heel Height (ft)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
Volume (ft3)	38,013	20,106	20,106	70,686	45,239	70,686	31,416	49,087	49,087	49,087		
Volume (bbl)	6,771	3,581	3,581	12,590	8,058	12,590	5,596	8,743	8,743	8,743		
Volume (gal)	284,377	150,414	150,414	528,800	338,432	528,800	235,022	367,222	367,222	367,222		
Volume (liters)	1,076,367	569,318	569,318	2,001,509	1,280,966	2,001,509	889,560	1,389,937	1,389,937	1,389,937		
Avg Temp (F) (T)	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18	54.18		
Avg Temp (K) (T)	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47	285.47		
temp corr	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568	0.9568		
Moles	45,978	24,319	24,319	85,496	54,718	85,496	37,998	59,372	59,372	59,372		
VP of VOC (psia)	6.62	6.62	6.62	6.62	6.62	6.62	6.62	6.62	3.72	3.72		
VOC theo fraction	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.25	0.25		
Saturation Factor	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60		
Moles VOC	12,424	6,571	6,571	23,102	14,785	23,102	10,267	16,043	9,024	9,024		
Molecular weight (g/g-mole)	61.00	61.00	61.00	61.00	61.00	61.00	50.00	61.00	49.82	49.82		
VOC (grams/landing)	757,841	400,841	400,841	1,409,208	901,893	1,409,208	513,373	978,617	449,541	449,541		
VOC (lbs/landing)	1,670.73	884	884	3,107	1,988	3,107	1,132	2,157	991	991		
Number of Landings per Yr	2	2	2	2	1	2	2	3	2	2		
Average Days per Landing	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
VOC (lbs) Filling	3,341	1,767	1,767	6,213	1,988	6,213	2,264	6,472	1,982.10	1,982.10		
VOC (Ibs) Standing	1,016	537	537	1,889	604	1,889	688	1,968	602.56	602.56		
Total VOC (lbs) (Lf + Ls)	4,357	2,305	2,305	8,102	2,593	8,102	2,952	8,440	2,585	2,585		
Total VOC (tons)	2.18	1.15	1.15	4.05	1.30	4.05	1.48	4.22	1.29	1.29		

*Modeled as Ethanol Only

**Modeled as Crude Oil Only

	Fraction					lbs/yr										
Total VOC	100.00%	4,357	2,305	2,305	8,102	2,593	8,102	2,952	8,440	2,585	2,585					
Benzene	0.41%	20	11	9	37	12	37	14	34	10	10					
Ethylbenzene	0.14%	6	3	3	11	4	11	4	12	4	4					
Hexane (-n)	3.96%	173	91	91	321	103	321	117	334	102	102					
Iso-octane	0.63%	27	15	15	51	16	51	19	53	16	16					
Toluene	0.87%	38	20	20	70	23	70	26	73	22	22					
Xylene (-m)	0.67%	29	16	16	55	17	55	20	57	17	17					
Naphthalene	0.05%	2	1	1	4	1	4	2	4	1	1					
Methanol	1.18%	51	27	27	96	31	96	35	100	30	30					
Total HAP Species	7.90%	347	183	182	645	206	645	235	667	204	204					
Non Hap VOC	92.10%	4,010	2,121	2,122	7,458	2,386	7,457	2,717	7,773	2,380	2,380					

NOTE: Landing emissions calculated using methodology from API Technical Report 2567 - Evaporative Loss from Storage Tank Floating Roof Landings.

Fuel Combustion Emissions

Existing Exempt Combustion Sources:

Unit ID	Product	Source	Gal/yr (Liquid)	SCF/yr (Gas)	Liters/year (Gas)	MMBTU/yr
NA	Distillate	Furnace	590			-
NA	Natural Gas	Boiler (water bldg)	-			54
NA	Natural Gas	Boiler (garage)	-			22
NA	Natural Gas	Boiler (office)	-			163
NA	Natural Gas	Furnace	-			120

Proposed Exempt Combustion Sources:

Unit ID	Product	Source	Gal/yr (Liquid)	SCF/yr (Gas)	Liters/year (Gas)	MMBTU/yr
NA	Natural Gas	Heater (line trace)	-			35,040
NA	Natural Gas	Boiler (line trace)	-			35,040
NA	Natural Gas	Boiler (tanks)	-			52,560
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724
NA	Natural Gas	Boiler (lube bldg)	-			86,724

Existing Non-Exempt Combustion Sources:

VCUML/VCUM2/VCURR*	Natural Gas	VCU	-		200.000
					,
*Includes natural gas used as assis	t gas for both marine V	CUs (VCUML and V	CUM2) and the	rail VCU (VCURR)	

Distillate Combustion Emissions:

					Combustion	Emissions					
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2			
Emission Factor - lb/1000 gal*	2.00	52.54	20.00	0.20	5.00	0.22	0.26	2.2E+04	(CH4*25)+(N2O*298)+		
lb/yr	1.18	31.00	11.80	0.12	2.95	0.13	0.15	13157.00	1		
tons/yr	0.00	0.02	0.01	0.00	0.00	0.00	0.00	6.58			
* Emission factors used to estimate	Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I. SOx, Nox, CO, and PM										

Emission Factors are from Table 1.3-1. VOC Emission Factor is from Table 1.3-3. CO2 Emission Factor is from Table 1.3-12.

** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example calculation (using SOx):

= gal/yr / 1000 gal * Emission Factor

= 590 gal/yr / 1000 gal * 52.54 lb/1000 gal (SOx)

= 31.00 lb/yr

Natural Gas Combustion Emissions (from existing sources)*:

					Combustion I	Emissions			
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**
Emission Factor - Ib / MM BTU**	0.0075	0.00059	0.098	0.0054	0.082	0.002	0.002	117.647	(CH4*25)+(N2O*298)+(CO2*1
lb/yr	1,492.87	117.86	19,643.04	1,080.37	16,500.15	451.79	432.15	23,571,647.06	23,711,721.5
tons/yr	0.75	0.06	9.82	0.54	8.25	0.23	0.22	11,785.82	11,855.8

*Total emissions from natural gas combustion from existing sources include emissions from the combustion of natural gas in furnaces and boilers and emissions from the combustion of natural gas used as assist gas in the VCUs.

** Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Tables 1.4-1, 1.4-2, and 1.4-3, except for GHG.

*** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example Calculation (using SOx):

= Total Natural Gas Used * Emission Factor

= Total Natural Gas Used (200,359) MMBTU/yr * 0.00059 lb / MM BTU

= 458 lb/yr

Natural Gas Combustion Emissions (from proposed sources)*:

	Combustion Emissions												
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**				
Emission Factor - Ib / MM BTU**	0.0075	0.00059	0.098	0.0054	0.082	0.002	0.002	117.647	(CH4*25)+(N2O*298)+(CO2*1				
lb/yr	3,498.50	276.20	46,032.94	2,531.81	38,667.67	1,058.76	1,012.72	55,239,529.41	55,567,790.32				
tons/vr	1.75	0.14	23.02	1.27	19.33	0.53	0.51	27.619.76	27.783.90				

*Total emissions from natural gas combustion from proposed sources include emissions from the combustion of natural gas in proposed boilers.

** Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, Tables 1.4-1, 1.4-2, and 1.4-3, except for GHG.

*** GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example Calculation (using SOx):

= Total Natural Gas Used * Emission Factor

= Total Natural Gas Used (469,536) MMBTU/yr * 0.00059 lb / MM BTU

= 458 lb/yr





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VCU Vapor Combustion Emissions

(Emissions from Combustion of Petroleum Product Loaded)

Petroleum Vapor Combusted (Ibs):

3,716,777 Total	
-----------------	--

1,439,100 at VCUML (gasoline and ethanol loading) (See Marine Loading - Gas & Eth Calculations.)

- 809,804 at VCUM2 (crude loading) (See Marine Loading Crude Oil Calculations.)
- 1,467,873 at VCURR (gasoline loading) (See Rail Loading Gas & Eth Calculations.)

Conversion from Petroleum Vapor Combusted in lbs to MMSCF (as Natural Gas Equivalent):

MMSCF (as Natural Gas) = Petroleum Vapor Combusted (lbs) * (21,000 BTUs / lb gasoline (high avg. for C4-C8 gases)(/ (1000 BTU/SCF) / (1,000,000)

- MMSCF (as Natural Gas) combusted at VCUML = 37
- MMSCF (as Natural Gas) combusted at VCUM2 = 51
- MMSCF (as Natural Gas) combusted at VCURR = 31

Marine VCU Emissions from Gasoline & Ethanol Loading (Emission Unit VCUML):

		Combustion Emissions									
Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2			
Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*298		
lb/yr	229.68	229.68	5,967.82	4,533.17	NA	69.51	2,538.57	3,626,532.00	4,3		
tons/yr	0.11	0.11	2.98	2.27	NA	0.03	1.27	1,813.27			

Marine VCU Emissions from Crude Oil Loading (Emission Unit VCUM2):

	Combustion Emissions										
Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2	GHG		
Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*298)+(CO2*1)		
lb/yr	129.24	129.24	3,358.19	2,550.88	NA	39.11	1,428.49	2,040,706.95	2,467,376.25		
tons/yr	0.06	0.06	1.68	1.28	NA	0.02	0.71	1,020.35	1,233.69		

Rail VCU Emissions from Gasoline & Ethanol Loading (Emission Unit VCURR):

		Combustion Emissions									
Pollutant	PM	PM10	SOx	NOx	VOC*	CH4	CO	CO2			
Emission Factor - Ibs / MM SCF**	7.60	7.60	197.47	150.00	NA	2.30	84.00	120,000.00	(CH4*25)+(N2O*29		
lb/yr	234.27	234.27	6,087.14	4,623.80	NA	70.90	2,589.33	3,699,039.96	4		
tons/yr	0.12	0.12	3.04	2.31	NA	0.04	1.29	1,849.52			

* These emissions are from gasoline and crude oil vapor combustion and pilot light gas. Gasoline and crude oil VOCs are already accounted for in the VCU emissions (i.e. 2 mg/l loaded or 98% efficiency).
** PM Emission Factor is from AP-42 (Table 1.4-2), as it is higher than the Emission Factor from the VCU manufacturer of zero (0). SOx Emission Factor is calculated as described below. NOx Emission Factor is from VCU manufacturer, as it is higher than the AP-42 Emission factor of 140 lbs/MMSCF (Table 1.4-1). CO Emission Factors is identical from VCU manufacturer and AP-42 (Table 1.4-1). GHG Emission calculated by using the CO2 Equivalency Factor for CO2 (1) and CO (3.7).

Example calculation of SOx Emission Factor:

SOx Emission Factor = $y_{H2S} * (1/C) * M_{SO2} * MW_{SO2}$

(Equation from EPA Emission Inventory Improvement Program (EIIP) Document Volume 3, Ch.10: Preferred & Alternative Methods for Estimating Air Emissions from Oil and Gas Field Production & Processing Operations, Sept. 1999, Pg 10.2-16.)

y _{H2S, crude oil} =	0.001	(mole fraction of H2S in inlet gas (Ib mole H2S/ Ib mole) based on 10 ppm H2S liquid concentration)
C =	379.00	(molar volume of ideal gas at 60F and 1atm (scf/lb-mole))
M =	0.99	(molar conversion ratio from H2S to SO2 (lb-mole SO2/lb-mole H2S) (From VCU Manufacturer))
MW =	64.066	(molecular weight of SO2 (lb SO2/lb-mole SO2))
EF _{SOX,crude oil} =	197.47	lb/ MMSCF

Total of Combustion Sources

Pollutant	PM	PM10	SOx	NOx	VOC	CH4	CO	CO2	
lb/yr	5,585.75	1,018.25	81,100.93	15,320.15	55,170.77	1,690.20	8,001.42	88,190,612.38	90,6
tons/yr	2.79	0.51	40.55	7.66	27.59	0.85	4.00	44,095.31	



GHG
8)+(CO2*1)
172,432.15
2,236.22



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Emergency Generators (Exempt)

Emergency Generator Sources:

Fuel Type	Source	Gal/hr (Liquid)	SCF/hr (Gas)	Gal/hr (Gas)	MMBTU/hr*
Propane	QT100 Generator	13.9			1.26
Propane	QT100 Generator	13.9			1.26
Natural Gas	20kw NG Generator		1,020		1.02
Diesel	500kw	26.1			
Diesel	350kw	18.5			
Diesel	350kw	18.5			

*Generac Spec Sheet states, "For BTU content multiply gal/hr x 90950 (LP) or ft3/hr x 1000 (NG)."

Distillate Fired Engine Emissions:

					Pollu	tant			
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**
Factor - lb/1000 gal*	2.00	52.54	20.00	0.20	5.00	0.22	0.26	2.2E+04	(CH4*25)+(N2O*298)+(CO2*1)
lb/yr	63.10	1,657.64	631.00	6.31	157.75	6.81	8.20	703,565.00	706,179.86
tons/yr	0.03	0.83	0.32	0.00	0.08	0.00	0.00	351.78	353.09

* Emission factors used to estimate emissions are from AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I. SOx, Nox, CO, and

PM Emission Factors are from Table 1.3-1. VOC Emission Factor is from Table 1.3-3. CO2 Emission Factor is from Table 1.3-12.

** GHG Emission calculated by using the CO2 Equivalency Factors for CH4 (25), N2O (298) and CO2 (1).

Example calculation:

= gal/yr / 1000 gal * emission factor

Natural Gas & Propane Fired Engine Emissions:

	Ibs Pollutant / MM BTU								
Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG**
Factor*	0.0099	0.0006	2.270	0.0296	3.720	0.230	0.2	110.0	(CH4*25)+(N2O*298)+(CO2*1)
lb/yr	17.58	1.04	4,027.45	52.52	6,600.04	408.07	408.07	195,162.55	326,968.24
tons/yr	0.01	0.00	2.01	0.03	3.30	0.20	0.20	97.58	163.48

* Emission factors used to estimate emissions are from AP-42 Table 3.2-3.

** GHG Emission calculated by using the CO2 Equivalency Factors for CH4 (25), N2O (298) and CO2 (1).

Example Calculation of Natural Gas Useage

= Natural Gas Used

= Natural Gas Used * Emission factor

1,774 MMBTU/yr

Total of Generator Sources

Pollutant	PM	SOx	NOx	VOC	CO	CH4	N2O	CO2	GHG
lb/yr	80.68	1,658.68	4,658.45	58.83	6,757.79	414.88	416.27	898,727.55	1,033,148.10
tons/yr	0.04	0.83	2.33	0.03	3.38	0.21	0.21	449.36	516.57

H2S Calculations

12S Liquid Conc. (ppm)	10	
12S Vapor Fraction	0.00118	(from EPA TANKS 4.09d)
CUM2 VOC Emissions	3.76	tpy (from Load-Marine tab of PTE)
acility Fugitives (light liquid)	2937.65	lbs/yr (from Facility Fugitives tab of PTE)
FR Tank Emissions (inc. landings)	144198.63	Ibs/yr (from Emission Summary tab of PT

Point Sources

	Emission Rate (tpy)
Emission Unit	(VCUM2 Emissions x H2S Vapor Fraction)
VCUM2	0.00

Volume Sources (Tanks)

	Emission Rate (tpy)
Emission Unit	(IFR Tank Emissions x H2S Vapor Fraction)
TANKS	0.085

Area Sources (Fugitives)

Emission Unit	Emission Rate (tpy)
Facility Fugitives	0.002

Total H2S Emissions (tpy)

0.091

Note: Hydrogen sulfide is the most prevalent of the total reduced sulfurs, and therefore all TRS is assumed to be H2S.

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Estimate of Particulate Matter (PM-2.5) Emissions

Paved Roads - Emission Factor Derived from AP-42: 13.2.1	(01/11) (accounts for resuspended road material)
--	--

Eext =	[k (sL) ^{0.91} x (W) ^{1.02}] (1 - P/4N)			
Where:				
= Annual size sp	ecific emission factor extrapolated for r	natural mitigation (lb/\	/MT)	
k = PM-2.5 multipli	ier (lb/VMT) = 0.00054	lb/VMT (Table 1	13.2-1.1)	
sL* = Road Surface S	Silt Loading (g/m ²) =	1.1	g/m ² (Table 13.2.1-3)	
W = Mean Vechicle	e Weight (tons)			
P = Number of pred	cipitation days per year (>0.01 in precip	vitation) =	138	da
N = Number of day	s in the averaging period =	365	days (Annual Average)	

*Given the industrial processes listed in Table 13.2.1-3, operations at a terminal were determined to be closest to those at a corn wet mill. Therefore, the silt

Paved Roads - Emission Factor Derived Using EPA MOVES Model (includes vehicle exhaust, brake wear, and tire wear)

Assumptions Used in Model:	
Scale:	National (utilizes data from EPA databases)
Year Selected:	2013
Months Selected:	All Months
Hours Selected:	All Hours
Time Aggregation Level:	Hourly
Geographic Bounds:	Albany County
Vehicle Selected:	Combination long-haul truck
Fuel Selected:	Diesel Fuel
Road Type:	Urban, Restricted Access
Emissions Accounted for:	Running exhaust, crankcase running exhaust, brake wear, tire wear
Calculation of Number of Tanker Trucks at Facility	y Per Day
10,500.00 gallons	=storage capacity of each truck
373,192,668.00 gallons	=throughput of product at the truck rack in 2013
35,542.16 trucks per year	=trucks entering the facility in 2013 (product loaded at the truck rack/storage capacity of each truck)
35,543 trucks per year	
97.38 trucks per day	=trucks entering the facility each day (trucks per year/365)
98 trucks per day	
Calculation of Average Tanker Truck Weight	
80000 pounds	=loaded weight of smaller tanker trucks used (information obtained from terminal)
102000 pounds	=loaded weight of larger tanker trucks used (information obtained from terminal)
91000 pounds	=average weight of truck travelling through terminal (conservatively assume that half of the trucks are the larger tru conservatively assume that trucks are at their loaded weight when entering and exiting the facility)
45.5 tons	=average weight of truck traveling through terminal
Road Length - Paved Roads	
18550 inches	=length of paved road traveled by trucks, determined using facility site plan
1545.83 feet	=length of paved road traveled by trucks
0.29 miles	=length of paved road traveled by trucks

days (Albany, NY data)

⁻ trucks,

Estimate of Particulate Matter (PM-2.5) Emissions

Paved Roads - Emission Factors Derived from AP-42: 13.2.1 (01/11) and EPA MOVES Model

<u>Tanker Trucks (TT):</u> 98	Tanker trucks	per day		===>	Average weight =	45.5
98						45.5
Length of Paved Roads: L(TT) =	0.2	9 miles	Length of par	ved road tanker trucks trav	vel on one way.	
<u>Emission Factors:</u> E(TT) = E(EPA MOVES) =	0.02 4.09216E-0	6 Ib/VMT 6 Ib/VMT	Emission Fac Average hou	ctor derived from AP-42, V rly emission factor resultin	olume 1, Fifth Edition, Section g from MOVES run	on 13.2.1 (January 2
Emission Factor (total) =	0.02	6 lb/VMT	Sum of AP-4	2 and EPA MOVES Emiss	sion Factors	
Estimate of Particulate N Tanker Truck:	latter (PM-2.5) 98	<u>Emissions:</u> Trips/day	1	ways		
E(TT) =	0.75	lb PM-2.5/day				
TOTAL =	0.75	lb PM-2.5/day	-			
	0.14	tons PM-2.5/y	ear			

tons

tons

/ 2011)

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.2 (11/06)

Where:							
		= Annua	I size specific e	mission factor extrapolated for natura	al mitigation (lb/\	VMT)	
	S*	= Surfac	e material silt c	ontent (%) =	4.3	(Table 13.2.2-1)	
	W	= Mean V	√ehicle Weight	(tons)			
	k	=	0.15	lb/VMT (Table 13.2.2-2)			
	а	=	0.9	(Table 13.2.2-2)			
	b	=	0.45	(Table 13.2.2-2)			
	Р	= Numbe	er of precipitation	on days per year (>0.01 in percipitatio	n) =	138	days (Albany

*The unpaved road at the terminal was determined to have a silt content most similar to a service road. The silt content given for a taconite

Estimated Number of Trucks at Facility Per Day

5 trucks per day assume one maintenance crew on site each day with one truck entering and exiting the facility approximately five times each day

Average Truck Weight

5000 lbs 2.5 tons average weight of a light duty pickup truck (maintenance truck)

Road Length - Unpaved Roads

1500 feet estimated distance driven by each maintenance truck on each trip through the terminal 0.28 miles

ny, NY data)

2.5

2.5

tons

tons

Estimate of Particulate Matter (PM-2.5) Emissions

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.1 (11/06)						
<u>Maintenance Tre</u> 5	<mark>ucks (MT):</mark> Maint	c <u>ks (MT):</u> Maintenance Trucks per day			Average weight =	
5						
<u>Length of Unpav</u> L(MT) =	<u>ved Roads:</u>	0.28 miles	Length of unpaved road	d maintenance	trucks travel on one way.	
<u>Emission Factor</u> E(MT) =	<u>'S:</u>	0.034 lb/VMT				

Estimate of Particulate Matter (PM-2.5) Emissions:								
Maintenance Truck:	5	Trips/day	1	ways				
	0.05	Ib DM 2 5/day						
$\Box(WT) =$	0.05	10 FW-2.5/uay						
TOTAL =	0.05	lb PM-2.5/day						
	0.01	tons PM-2.5/year	•					

Estimate of Particulate Matter (PM-2.5) Emissions

Total PM-2.5 Emissions:

0.14 tons/year 0.01 tons/year	total PM-2.5 emissions from tanker trucks traveling on paved roads total PM-2.5 emissions from maintenance vehicles traveling on unpaved roads
0.15 tons/year	total fugitive PM-2.5 emissions from facility roads

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Estimate of Particulate Matter (PM-10) Emissions

Paved Roads - Emission Factor Derived from AP-42: 13.2.1 (01/11) (accounts for resuspended road material)

		Eext = $[k (sL)^{0.91}]$	x (W) ^{1.02}] (1 - P/4N)				
Where:		A	f				
		= Annual size specific emission	factor extrapolated to	or natural mitigatio	n (ID/VIVI I)		
	k	= PM-10 multiplier (lb/VMT) =	0.0022	lb/VMT (Tab	le 13.2-1.1)		
	sL*	= Road Surface Silt Loading (g/i	m²) =	1.1	g/m ² (Table 13.2.1-3	3)	
	W	= Mean Vechicle Weight (tons)	,		0	,	
	Р	= Number of precipitation days p	per year (>0.01 in pre	cipitation) =		138	days
	N	= Number of days in the averagi	ng period =	365	days (Annual Avera	ge)	

*Given the industrial processes listed in Table 13.2.1-3, operations at a terminal were determined to be closest to those at a corn wet mill. Therefore, the silt

Paved Roads - Emission Factor Derived Using EPA MOVES Model (includes vehicle exhaust, brake wear, and tire wear)

tire wear
tire wear

Calculation of Number of Tanker Trucks at Facility Per Day

10,500.00 gallons	=storage capacity of each truck
373,192,668.00 gallons	=throughput of product at the truck rack in 2013
35,542.16 trucks per year	=trucks entering the facility in 2013 (product loaded at the truck rack/storage capacity of each truck)
35,543 trucks per year	
97.38 trucks per day	=trucks entering the facility each day (trucks per year/365)
98 trucks per day	
Calculation of Average Tanker Truck Weight	

80000 pounds	=loaded weight of smaller tanker trucks used (information obtained from terminal)
102000 pounds	=loaded weight of larger tanker trucks used (information obtained from terminal)
91000 pounds	=average weight of truck travelling through terminal (conservatively assume that half of the trucks are the lan conservatively assume that trucks are at their loaded weight when entering and exiting)
45.5 tons	=average weight of truck traveling through terminal
Road Length - Paved Roads	
18550 inches	=length of paved road traveled by trucks, determined using facility site plan
1545.83 feet	=length of paved road traveled by trucks
0.29 miles	=length of paved road traveled by trucks

/s (Albany, NY data)

arger trucks,

Estimate of Particulate Matter (PM-10) Emissions

Paved Roads - Emission Factors Derived from AP-42: 13.2.1 (01/11) and EPA MOVES Model

	0.56	tons PM-10/ye	ear					
TOTAL =	3.06	lb PM-10/day	-					
E(TT) =	3.06	lb PM-10/day						
Estimate of Particulate Tanker Truck:	<u>Matter (PM-10)</u> 98	<u>Emissions:</u> Trips/day	1	ways				
Emission Factor (total) =	0.10	07 lb/VMT	Sum of AP-42 ar	nd EPA MOV	ES Emissior	n Factors		
<u>Emission Factors:</u> E(TT) = E(EPA MOVES) =	0.10 5.507E-0	07 Ib/VMT 06 Ib/VMT	Emission Factor Average hourly e	derived from emission facto	AP-42 or resulting f	rom MOVES run		
Length of Paved Roads L(TT) =	<u>s:</u> 0.2	29 miles	Length of paved	road tanker t	rucks travel	on one way.		
98							45.5	
<u>Tanker Trucks (TT):</u> 98	Tanker trucks	s per day			===>	Average weight =	45.5	

tons

tons

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.2 (11/06)

Where:						
		= Annual size specific	emission factor extrapolated for natura	al mitigation (lb/V	MT)	
s	;	= Surface material silf	t content for MSW Lanfills (%) =	4.3	(Table 13.2.2-1)	
v	1	= Mean Vehicle Weig	ht			
k	ζ	= 1.5	lb/VMT (Table 13.2.2-2)			
а	l	= 0.9	(Table 13.2.2-2)			
b)	= 0.45	(Table 13.2.2-2)			
P)	= Number of precipita	tion days per year (>0.01 in percipitatio	n) =	138	days (Alban

*The unpaved road at the terminal was determined to have a silt content most similar to a service road. The silt content given for a taconite

Estimated Number of Trucks at Facility Per Day

5 trucks per day assume one maintenance crew on site each day with one truck entering and exiting the facility approximately five times each day

Average Truck Weight

5000 lbs 2.5 tons average weight of a light duty pickup truck (maintenance truck)

Road Length - Unpaved Roads

1500 feet 0.28 miles estimated distance driven by each maintenance truck on each trip through the terminal

ny, NY data)

Estimate of Particulate Matter (PM-10) Emissions

Unpaved Roads - Emission Factors Derived from AP-42: 13.2.1 (11/06)

	Maintenance Trucks (M 5	/IT): Maintenance	e Trucks per day	===>	Average weight =	2.5		
	5					2.5		
	<u>Length of Unpaved Ro</u> L(MT) =	<u>ads:</u> 0.2	3 miles Length of unpav	ved road maintenand	ce trucks travel on one way.			
	<u>Emission Factors:</u> E(MT) =	0.34	1 Ib/VMT					
	<u>Estimate of Particulate</u> Maintenance Truck:	e Matter (PM- 5	10) Emissions: Trips/day 1	ways				
	E(MT) =	0.48	lb PM-10/day					
	TOTAL =	0.48	Ib PM-10/day					
		0.09	tons PM-10/year					
Estimate of Pa	stimate of Particulate Matter (PM-10) Emissions otal PM-10 Emissions:							
	0.50 0.09	6 tons/year 9 tons/year	total PM-10 emissions from total PM-10 emissions from	tanker trucks trave maintenance vehic	ling on paved roads les traveling on unpaved roa	ıds		
Estimate of Pa Total PM-10 Er	Estimate of Particulate Maintenance Truck: E(MT) = TOTAL = rticulate Matter (PM-10) nissions: 0.56 0.09	• Matter (PM- 5 0.48 0.48 0.09 Emissions Emissions	10) Emissions: Trips/day 1 Ib PM-10/day Ib PM-10/day tons PM-10/year total PM-10 emissions from total PM-10 em	ways tanker trucks trave maintenance vehic	ling on paved roads les traveling on unpaved roa	ıds		

0.65 tons/year total fugitive PM-10 emissions from facility roads

tons

tons

<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	117		Tank type	Internal Floating Roof		Date	07/09/20		
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY			[
Description	Aboveground Storage Tank			•					
	INPUT DATA					CALCULATIONS	<u></u>		
			Units			Symbol	Units		
		Symbo	1	<u>Units</u>	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,375.78 lb-mole/ft*yr	
Molecular Weigh	t				Zero wind spee	ed LR factor; see Table 7.1-8	KRa	1.6 lb-mole/(mph)nft*	
Molecular weigh	nt	Mv	62	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3 NA	
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	V	0.0 mph	
Shell height		Hs	48.00		Seal-related wi	ind speed exponent; see Table 7.1-8	n	1.6 NA	
Diameter		D	110.00	ft	Vapor pressure	e function; see Figure 7.1-19	P*	0.13 NA	
Tank volume			2,743,229	gallons	Tank diameter		D	110.00 ft	
Turnovers		N	58.38		Average vapor	molecular weight; see Note 1 to Equation 1-21	Μv	62.00 lb/lb-mole	
Throughput		Q	160,152,189	gal/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	1.00 NA	
Number of fixed	roof support columns	Nc	0.00	NA			'	ļ	
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcFc/D)])	LW	274.59 lb/yr	
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	Ib-mole/ft-yr	Annual through	nput	Q	3,813,147 bbl/yr	
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	tactor; see Table 7.1-10	Cs	0.0015 bbl/1,000 ft2	
Wind speed dep	bendent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	iic liquid density	WL	5.60 lb/gal	
Average ambier	nt wind speed at tank site; if IFR use Zero	۷	0.0	mph	Tank diameter		D	110.00 ft	
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94 1,000 ft3*gal/bbl2	
Vapor pressure	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	d roof support columns	Nc	0.00 NA	
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colum	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10 ft	
Average organic	c liquid density	WL	5.60	lb/gal	-		'	· · · · · · · · · · · · · · · · · · ·	
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losses	s (Eq.2-13: LF = FF P*MvKc)	LF	476.83 lb/yr	
Average Reid V	apor Pressure	RVP	13.00		l otal deck fittin	ng loss factor; see Eq. 2-14	FF Dt	61.00 lb-mole/yr	
Stock ASTM-D8	36 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressure function; see Figure 7.1-19			0.13 NA	
Emistica 1.05 F		Dut	5 0000		Average vapor	molecular weight; see Note 1 to Equation 1-21	MV	62.00 lb/lb-mole	
Equation 1-25 P	$VA = \exp(A - (B/ILA))$	PvA	5.8026		Product factor;	0.4 for crude oils or 1 for other organic liquids	KC	1.00 NA	
Ea from Fig 7.1	15: 15 64 1 954*\$\$40 5 (0 9742 0 2290 * \$40 5) In (D)(D)	^	11 644		Dook Soom Loopoo	$(E_{\alpha}, 2, 49) \mid D = KDSDD2D*M_V(K_{\alpha})$		2.649.39 lb/ur	
Eq from Fig 7.1	15: 9742 1042*\$40.5 - (1040 170 * \$40.5) ln (RVP)	A D	5 042 6		Deck Seam Losses (Eq.2-16: LD = KDSDD2P*MVKc)			0.14 lb molo/ft vr	
	-15. 8742-1042 3 0.5 - (1049-179 3 0.5) III (RVF)	Б	5,045.0		Deck seam lon	as per unit seath length lactor, 0.0 01 0.14		0.14 10-1101e/11-yi	
$T = 0.4 \times T = 0.4$	$\pm 0.6*TP \pm 0.005*a*1 (Eqn. 1.28)$		540.24	*P	Tank diamotor	Igit factor, Length of Seath? Area of Deck			
Average daily a	+ 0.0 TB + 0.005 u T (Equation 1-20)		508.2	*P	Vanor pressure	a function: see Figure 7.1-10	D*		
Liquid bulk tem	perature (Equation 1-31)	TR	500.2	*P		molecular weight: see Note 1 to Equation 1-21	My	62.00 lb/lb-mole	
Tank paint solar	absorptance dimensionless Table 7 1-6	а а	0.3	IX	Product factor	0.4 for crude oils or 1 for other organic liquids	Kc		
Daily total solar	insolation on a horizontal surface. Btu/(ft2 day)	u I	1180.0					1.00 11/	
Daily total Solar	Average Daily Liquid Surface Temperature:	•	50.5	*F	Total Losses (Eg. 2-1 & 2-2: T = R+ W+ F+ D)		I.T.	4 775 58 lb/yr	
	Average Daily Elquid Gunace Temperature.		50.5		10101 203303 (24.2-	-102-2. ET = E(CEW)E(CED)		4,170.00 10/y1	
TAA = ((TAX+T)	AN)/2)	ТАА	508 20	*B	-			<u> </u>	
average daily m	aximum ambient temperature. Table 7 1-2	TAX	517 10	*B					
average daily m	inimum ambient temperature. Table 7 1-2	TAN	499.30	*B					
are age daily in			100.00						
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 αs I	ТВ	509.09	*R	-1				
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6		000.00						
			Loss Factor						
Quanity of Eac	h Fitting:	Otv	Kf	Source					
Access Hatch (E	Bolted/Gasketed)	2	1.6	Table 7.1-12					
Automatic Gauc	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12					
Column Well (B	uilt-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12					
Sample Pipe/Well (Slit Fabric Seal 10% Open)		2	12.0	Table 7.1-12					
Stub Drain (Slit Fabric Seal 10% Open) 23		23	1.2	Table 7.1-12					
Vacuum Breaker (Weighted Mech. Actu.; Gasketed)		1	6.2	Eq.2-7 & Table 7.1-12					
Slotted Guide-P	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12					
Legs		0	7.9	Table 7.1-12					
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-	Pole Combination	0	60.0	Table 7.1-12					
	Total deck fitting loss factor:		61.00	Eq. 2-6					

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Table 1							
TANK EMISSION CALCULATION							
(Note - Cells in pink are input cells. All other cells are calculated cells.)							

Tank No.	118 Tank tyr		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	er
City	Albany		State	NY					
Description	Aboveground Storage Tank		-						
	INPUT DATA					CALCULATIONS			
				Units			Symbol		Units
		Symbo	I	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,250.71	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weigh	t	Μv	62	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	100.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Tank volume			2,220,637	gallons	Tank diameter		D	100.00	ft
Turnovers		Ν	58.38		Average vapo	molecular weight; see Note 1 to Equation 1-2	Mv	62.00	lb/lb-mole
Throughput		Q	129,642,796	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	244.51	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	3,086,733	bbl/yr
Zero wind speed	LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter	·	D	100.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	cliquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	4,968.44	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitti	ng loss factor; see Eq. 2-14	FF	635.60	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapo	molecular weight; see Note 1 to Equation 1-2	Mv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.644		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	2,188.74	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	5,043.6		Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
-					Deck seam lei	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA -	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Tank diameter		D	100.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	ТВ	509.1	*R	Average vapo	molecular weight; see Note 1 to Equation 1-2	1Mv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	8,652.40	lb/yr
TAA = ((TAX+TA)	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	inimum ambient temperature, Table 7.1-2	IAN	499.30	*R					
		TD	500.00	10					
Liquid Bulk Tem	perature; $\vdash q$ 1-31: IB = IAA + 0.003 α s I	IR	509.09	<u>-к</u>					
I OTAI GECK fitting	loss factor using Equation 2-14; see Eq. 2-6								
	h Eitting,	0	Loss Factor	0.0					
Quanity of Each	n Fitting:		<u>KI</u>	Source					
Access Halch (E	Bolled/Gaskeled)	2	1.0						
Automatic Gaug	vilt Lip: Cooketed Sliding Cover)	0	2.8						
Column Well (Bu	ull-Op, Gaskeled Sliding Cover)	0	33.0						
Stub Drain (Slit	En joint abric Seal 10% Open)	90	12.0	Table 7 1-12					
Vacuum Brocke	r (Weighted Mech. Actu: Gasketed)	00	1.2	Fa 2-7 & Table 7 1 12					
Slotted Guide D	n (weighted Weight, Actu., Gaskeled) ole (Gasketed Sliding Cover w Sleeve/Miner)	0	0.2	Eq.2-7 & Table 7.1-12 For 2-7 & Table 7.1-12					
	ore (Cashered Shulling Cover w Sieeve/Wilher)	59	0.3	Ly.2-7 & Table 7.1-12					
Leys		00	7.9	Table 7 1-12					
Ladder / Guida	Pole Combination	1	0.00	Table 7 1-12					
		<u> </u>	00.0						
	Total deck fitting loss factor		635.60	Fa 2-6	-				
		1	000.00		-1				

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	119		Tank type	Internal Floating Roof	Date			07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY			-		
Description	Aboveground Storage Tank						-		
	INPUT DATA					CALCULATIONS			
				Units			Symbo	í	Units
								Γ	
		Symbo		Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,000.57	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf
Molecular weigh	nt	Μv	62	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data	1				Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	80.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Tank volume			1,434,161	gallons	Tank diameter		D	80.00	ft
Turnovers		Ν	58.38		Average vapo	molecular weight; see Note 1 to Equation 1-2	1Mv	62.00	lb/lb-mole
Throughput		Q	83,727,616	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	197.39	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	1,993,515	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	pendent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	80.00	ft
Seal-related win	nd speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bb
Vapor pressure	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	3,586.72	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitti	ng loss factor; see Eq. 2-14	FF	458.84	lb-mole/yr
Stock ASTM-D8	36 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapo	molecular weight; see Note 1 to Equation 1-2	1Mv	62.00	lb/lb-mole
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	5.8026		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	-15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.644		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	1,400.79	lb/yr
Eq from Fig 7.1-	-15: 8742-1042*S^0.5 - (1049-179 * S^0.5) In (RVP)	В	5,043.6		Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam le	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*l (Eqn. 1-28)	TLA	510.21	*R	Tank diameter		D	80.00	ft
Average daily ar	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	ТВ	509.1	*R	Average vapor molecular weight; see Note 1 to Equation 1-2		1Mv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor; 0.4 for crude oils or 1 for other organic liquid		Kc	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	6,185.47	lb/yr
								<u> </u>	
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily m	inimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	509.09	*R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6		-		_				
			Loss Factor	-	_				
Quanity of Eac	h Fitting:	Qty	<u>Kf</u>	Source					
Access Hatch (E	Bolted/Gasketed)	2	1.6	Table 7.1-12					
Automatic Gaug	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12					
Column Well (Bu	uilt-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12					
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	1	12.0	Table 7.1-12	_				
Stub Drain (Slit	Fabric Seal 10% Open)	51	1.2	Table 7.1-12	_				
Vacuum Breake	r (Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-12	_				
Slotted Guide-P	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12	_				
Legs		40	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-I	Pole Combination	1	60.0	Table 7.1-12	_				
					_				
	Total deck fitting loss factor:	ļ	458.84	Eq. 2-6					
I					1				

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	120		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	ər
City	Albany		State	NY					
Description Aboveground Storage Tank									
	INPUT DATA					CALCULATIONS			
			1	Units			Symbo		Units
									0
		Symbo	1	Unite	Pim Soal Lossos (F	$a 2_3 \cdot I B = (KB_2 + KB_2 + VA_2)DB^* My Kc)$	IP	1 000 57	lb_mole/ft*vr
Molocular Woight	4	Symbo		01113	Zero wind sne	d L P factor: see Table 7 1-8	KP ₂	1,000.57	lb-mole/(mph)nff
Molecular weigh	t t	Mv	62	l h/lh-mole	Wind speed de	pendent I R factor: see Table 7.1-8	KPh	0.3	
Tank decign data	N		02	Ebrid-Indie	Avorago ambio	pendent El lactor, see Table 7.1-0		0.0	mph
Sholl hoight		Цc	49.00		Soal related w	and speed at tank site, if IFK use Zero	- V	0.0	прп
Diameter		ns D	40.00	£4	Vener pressure	function: and Figure 7.1.10	D*	0.12	
Tank values		D	00.00	IL	Vapor pressure	e function, see Figure 7.1-19		0.13	INA G
		N	1,430,858	galions		malesular weight and Note 4 to Equation 4.92		80.00	IL lh/lh.maala
Turnovers		IN O	58.38		Average vapor	molecular weight; see Note 1 to Equation 1-2		62.00	90m-di/di
Inrougnput	and a sub-sub-sub-sub-sub-sub-sub-sub-sub-sub-	Q	83,534,784	gai/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Number of fixed	roor support columns	NC	0.00	NA					. ,
Effective column	n diameter; 1.1, 0.7, or 1.0	FC	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NCF		196.93	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual through	nput	Q	1,988,923	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	bendent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	ic liquid density	WL	5.60	lb/gal
Average ambien	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	80.00	ft
Seal-related win	id speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure	function; see Eq. 2-4	P*	0.126	NA	Number of fixe	d roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colun	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	3,586.72	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fittin	Total deck fitting loss factor; see Eq. 2-14		458.84	lb-mole/yr
Stock ASTM-D8	36 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressure function; see Figure 7.1-19		P*	0.13	NA
					Average vapor	molecular weight; see Note 1 to Equation 1-27	l Mv	62.00	lb/lb-mole
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	5.8026		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	-15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) In (RVP)	А	11.644		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	1,400.79	lb/yr
Eq from Fig 7.1-	-15: 8742-1042*S^0.5 - (1049-179 * S^0.5) In (RVP)	В	5,043.6		Deck seam los	s per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam ler	gth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*l (Eqn. 1-28)	TLA	510.21	*R	Tank diameter		D	80.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressure function; see Figure 7.1-19		P*	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	TB	509.1	*R	Average vapor molecular weight; see Note 1 to Equation 1-2		1 Mv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor:	Product factor: 0.4 for crude oils or 1 for other organic liquids		1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0						
, ,	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eg.2	1 & 2-2: LT = LR+LW+LF+LD)	LT	6.185.02	lb/vr
					· ·			, í	Ĺ
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily m	aximum ambient temperature. Table 7.1-2	TAX	517.10	*R					
average daily m	inimum ambient temperature. Table 7.1-2	TAN	499.30	*R					
					U				
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 αs	тв	509.09	*R	l l				
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6								
rotar acon mang									
			Loss Factor						
Quanity of Fac	h Fitting:	Otv	Kf	Source					
Access Hatch (F	Rolted/Gasketed)	2	16	Table 7 1-12					
Automatic Gaug	vo Hateb (Balted/Caskated)	-	1.0	Table 7.1.12					
Column Woll (P	uit Lip: Casketed Sliding Cover)	0	2.0	Table 7.1-12					
Somple Pipe/M/	all (Slit Eabria Soal 10% Open)	1	12.0	Table 7.1-12					
Sample Filter Viven (Silt Fabric Sear 10% Open)		54	12.0	Table 7.1-12	—				
Stub Drain (Silt Fabric Sear 10% Open)		51	1.2	Table 7.1-12	—				
Vacuum Breaker (Weighted Mech. Actu.; Gasketed)		1	6.2	Eq.2-7 & Table 7.1-12					
Slotted Guide-Pole (Gasketed Sliding Cover w Sleeve/Wiper)		0	8.3	Eq.2-7 & Table 7.1-12					
Legs		40	7.9	Table 7.1-12					
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-	Pole Combination	1	60.0	1 able 7.1-12					
	The start start of the Mathematic Start St		450.01	Fz 0.0					
<u>L</u>	I OTAL DECK TITTING IOSS factor:	-	458.84	⊏y. 2-0					
		1	1		íl –				

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	121		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	er
City	Albany		State	NY					
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
				Units			Symbol	í –	Units
							<u>Г</u>	Γ	
		Symbo	I	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,876.06	lb-mole/ft*yr
Molecular Weigh	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weigh	ıt	Μv	62	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data	l				Average ambie	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	150.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Tank volume			5,105,286	gallons	Tank diameter		D	150.00	ft
Turnovers		Ν	58.38		Average vapor	molecular weight; see Note 1 to Equation 1-2	Μv	62.00	lb/lb-mole
Throughput		Q	298,051,213	gal/yr	Product factor	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	374.75	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	nput	Q	7,096,457	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	ic liquid density	WL	5.60	lb/gal
Average ambier	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	150.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	d roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	8,137.43	lb/yr
Average Reid V	apor Pressure	RVP	13.00		Total deck fitti	ng loss factor; see Eq. 2-14	FF	1,041.00	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapor	molecular weight; see Note 1 to Equation 1-2	Μv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	15: 15:64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.644		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	4,924.67	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) In (RVP)	В	5,043.6		Deck seam los	s per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
TI A		T 1 A		+D	Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
1LA = 0.4^1AA	+ 0.6° I B + 0.005° α° I (Eqn. 1-28)	TLA	510.21	^R *P	l ank diameter	functions and Finance 7.4.40	D	150.00	π
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	^R	Vapor pressur	e function; see Figure 7.1-19	P^	0.13	NA
Liquid buik temp	perature (Equation 1-31)	IB	509.1	"R	Average vapor	molecular weight; see Note 1 to Equation 1-2	IVIV	62.00	ID/ID-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Dally total solar	Insolation on a norizontal surface, Btu/(ft2 day)	I	1180.0	* [Total Lasana (Em 2			45 343 04	lle /s or
	Average Daily Liquid Surface Temperature:		50.5		Total Losses (Eq.2	-1 & 2-2: L1 = LR + LW + LF + LD)		15,312.91	id/yr
TAA = //TAY + T		TAA	509.20	*D				<u> </u>	<u> </u>
	RN//2)		506.20	R *D	_				
average daily m	inimum ambient temperature. Table 7.1.2		400.20	*D	_				
average daily in		TAN	499.30	N					
Liquid Bulk Tem	perature: Eq. 1-31: TB = TAA + 0.003 qc I	TB	500.00	*D					
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6	10	000.00	IX					
rotar abolt intering			Loss Factor						
Quanity of Fac	h Fitting:	Qtv	Kf	Source					
Access Hatch (F	Bolted/Gasketed)	2	16	Table 7 1-12					
Automatic Gaug	e Hatch (Bolted/Gasketed)	1	28	Table 7 1-12					
Column Well (B	uilt-Up: Gasketed Sliding Cover)	0	33.0	Table 7 1-12					
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	1	12 0	Table 7.1-12					
Stub Drain (Slit	Fabric Seal 10% Open)	60	1.2	Table 7.1-12					
Vacuum Breake	r (Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-12	_				
Slotted Guide-P	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12					
Legs		112	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-	Pole Combination	1	60.0	Table 7.1-12					
				1					
	Total deck fitting loss factor:	1	1,041.00	Eq. 2-6					
		-	,	1					

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	114		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
				Units			Symbol	í –	Units
								Γ	
		Symbo	l	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,500.85	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weigh	ıt	Μv	62	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data	1				Average ambie	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	120.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Tank volume			3,787,905	gallons	Tank diameter		D	120.00	ft
Turnovers		Ν	58.38		Average vapor	molecular weight; see Note 1 to Equation 1-2	Μv	62.00	lb/lb-mole
Throughput		Q	221,141,319	gal/yr	Product factor	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	347.56	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	5,265,270	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	120.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	d roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	1,341.70	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitti	ng loss factor; see Eq. 2-14	FF	171.64	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapor	molecular weight; see Note 1 to Equation 1-2	Mv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.644		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	3,151.79	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) In (RVP)	В	5,043.6		Deck seam los	s per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
TI A		T 1 A		+D	Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
1LA = 0.4*1AA ·	+ 0.6*1B + 0.005*α*1 (Eqn. 1-28)	ILA	510.21	*R	I ank diameter		D	120.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	^R	Vapor pressur	e function; see Figure 7.1-19	P^	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	IB	509.1	^R	Average vapor	molecular weight; see Note 1 to Equation 1-2	MV	62.00	Ib/Ib-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0	4F					
	Average Daily Liquid Sufface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: L1 = LR+LW+LF+LD)		6,341.90	id/yr
TAA = //TAX + TAAA = TAAA = TAAA = TAAA = TAAAA = TAAAAAAAA		T A A	500.00	*D					<u> </u>
IAA = ((IAX+IA)	AN)/2)		508.20	"R *D	_				
average daily m	aximum ambient temperature, Table 7.1-2		517.10	*R	_				
average daily m		TAN	499.30	R					
Liquid Bulk Tom	porature: Eq. 1.21: $TP = TAA + 0.003$ gc l	тр	500.00	*D					
Total deck fitting	Jose factor using Equation 2-14: soo Eq. 2-6	ТВ	509.09	N					
Total deck litting	1033 1actor using Equation 2-14, see Eq. 2-0		Loss Eactor						
Quanity of Eac	h Fitting:	054	LUSSTACIO	Sourco					
Access Hatch (F	Rolted/Gasketed)	2	16	Table 7 1-12					
Automatic Gaug	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12					
Column Well (Bi	uilt-Un: Gasketed Sliding Cover)	0	33.0	Table 7 1-12					
Sample Pine/We	ell (Slit Fabric Seal 10% Open)	2	12 0	Table 7.1-12					
Stub Drain (Slit	Fabric Seal 10% Open)	115	12.0	Table 7.1-12					
Vacuum Breake	r (Weighted Mech. Actu.: Gasketed)	1	62	Eq.2-7 & Table 7.1-12					
Slotted Guide-P	ole (Gasketed Sliding Cover w Sleeve/Winer)	0	8.3	Eq.2-7 & Table 7 1-12					
Leas		0	79	Table 7.1-12					
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-I	Pole Combination	0	60.0	Table 7.1-12					
				-	_				
	Total deck fitting loss factor:	<u> </u>	171.64	Eg. 2-6	_				
		t							

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	115		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description Aboveground Storage Tank									
INPUT DATA			·			CALCULATIONS			
				Units			Symbol	J.	Units
		Symbo		Units	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,876.06	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weigh	t	Μv	62	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	48.00	-	Seal-related wind speed exponent; see Table 7.1-8		n	1.6	NA
Diameter		D	150.00	ft	Vapor pressure function; see Figure 7.1-19		P*	0.13	NA
I ank volume			5,642,527	gallons	l ank diameter		D	150.00	ft
Turnovers		N	58.38		Average vapo	r molecular weight; see Note 1 to Equation 1-21	Mv	62.00	Ib/Ib-mole
I hroughput		Q	329,415,828	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Number of fixed	roof support columns	NC F	0.00	NA	Martin June 11 1		1.14/	44.40	11- 6
Effective column	nor unit accm length factor: 0.0 ar 0.14	FC	1.10	IL Ib molo/ft yr	Annual throug	(Eq.2-19: LWD=[((0.943)QCSWL)/D]*[1+(NCFC		414.19	ID/yr
Zere wind energy	per unit seam length factor, 0.0 or 0.14	KD KDo	0.14	ID-MOIE/IT-yr	Annual throug	nput footor: coo Toblo 7.1.10	Q	7,843,234	DDI/yr
Zero wind speed	J LR Ideloi, see Table 7.1-0	кка	1.0			laciol, see Table 7.1-10	US MI	0.0015	DDI/ 1,000 112
Average ambien	t wind speed at tank site; if IEP use Zero		0.3	moh	Tank diameter			150.00	ib/gai ft
Seal-related win	d sneed exponent: see Table 7 1-8	v	0.0	NΔ	Constant		0.943	0.94	1 000 ft3*aal/bbl
Vapor pressure	function: see Figure 7.1-19	D*	0.126	NA	Number of five	ad roof support columns	0.343 No	0.94	NA
Shell clingage fa	actor: see Table 7.1-10	l Cs	0.120	bbl/1 000 ft2	Effective colur	nn diameter: 1 1 0 7 or 1 0	Fc	1 10	ft
		W/I	5.60	lb/gal	Elicetive colui		10	1.10	n
Deck seam leng	th factor: Length of Seam / Area of Deck	SD	0.00	ft/ft2	Deck Fitting Losse	s (Eq. 2-13: E = EE P*MyKc)	I F	1 949 54	lb/vr
Average Reid Va	apor Pressure	RVP	13.00	ione.	Total deck fitting loss factor: see Eq. 2-14		FF	249.40	lb-mole/vr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function: see Figure 7.1-19	P*	0.13	NA
		-			Average vapo	r molecular weight: see Note 1 to Equation 1-21	Mv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
						,			
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) In (RVP)	A	11.644		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	4,924.67	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	5,043.6		Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*l (Eqn. 1-28)	TLA	510.21	*R	Tank diameter		D	150.00	ft
Average daily ar	nbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	TB	509.1	*R	Average vapor	r molecular weight; see Note 1 to Equation 1-21	Μv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	9,164.46	lb/yr
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily m	inimum ambient temperature, Table 7.1-2	IAN	499.30	*R					
			500.00	10					
Liquid Bulk Tem	perature; Eq 1-31: $IB = IAA + 0.003 \alpha s I$	IB	509.09	^R					
I otal deck fitting	loss factor using Equation 2-14; see Eq. 2-6				_				
Quanity of East	h Fitting:	044	LOSS FACTOR	Source	_				
	Rollad (Caskated)		10	Source Table 7 1-12	_				
Automatic Gaug	e Hatch (Bolted/Gasketed)	2	1.0 2.9	Table 7 1-12	_				
Column Well (Bi	uit In: Casketed Sliding Cover)	0	2.0	Table 7.1-12	_				
Sample Pine/We	all (Slit Fabric Seal 10% Open)	2	12.0	Table 7 1-12					
Stub Drain (Slit I	Fabric Seal 10% Open)	180	12.0	Table 7 1-12	_				
Vacuum Breake	r (Weighted Mech. Actu : Gasketed)	1	6.2	Fg 2-7 & Table 7 1-12	_				
Slotted Guide-P	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12	_				
Leas		0	7 9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-	Pole Combination	0	60.0	Table 7.1-12	_				
			23.0		_				
	Total deck fitting loss factor:	1	249.40	Eq. 2-6	_				
	,	İ							
		1			_				
1			1	1					

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	31		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				ſ	
Description Aboveground Storage Tank									
INPUT DATA						CALCULATIONS			
				Units			Symbol		Units
		Symbo		Units	Rim Seal Losses (I	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	3,224.48	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft
Molecular weight	t	Μv	62	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.1	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	45.00	0	Seal-related w	rind speed exponent; see Table 7.1-8	n Dt	3.0	NA
Diameter		D	125.00	ft	Vapor pressur	e function; see Figure 7.1-19	P^	0.13	NA
		NI	3,801,825	galions		r malagular weight: and Note 1 to Equation 1.21	D	125.00	IL Ih/Ih molo
Turnovers			221 052 091	coller	Rverage vapo Broduct factor	: 0.4 for grude oils or 1 for other organic liquids	Ko	02.00	
Number of fixed	roof support columns	Q No	221,953,981	NA	FIGUUCI IACIO		κι.	1.00	INA
Effective column	diameter: 1 1 0 7 or 1 0	Fc	1 10	ft	Withdrawal losses	(Eq.2-19: WD=[((0.943)OCsWI)/D]*[1+(NcEc	-IW	364 35	lb/vr
Deck seam loss	per unit seam length factor: 0.0 or 0.14	KD	0.14	lb-mole/ft-vr	Annual throug	hnut	0	5 284 619	hbl/vr
Zero wind speed	LR factor: see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft*vr	Shell clingage	factor: see Table 7.1-10	Cs	0.0015	bbl/1.000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.1	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	it wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter	i de la comp	D	125.00	ft
Seal-related wind	d speed exponent; see Table 7.1-8	n	3.0	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure f	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	ed roof support columns	Nc	10.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	cliquid density	WL	5.60	lb/gal				ſ	
Deck seam lengt	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	4,013.21	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitting loss factor; see Eq. 2-14		FF	513.40	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-21	Μv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
.							<u> </u>		
Eq from Fig 7.1-	15: 15:64-1.854^S^0.5 - (0.8742-0.3280 * S^0.5) In (RVP)	A	11.644		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	3,419.91	lb/yr
Eq from Fig 7.1-	15: 8742-1042°S^0.5 - (1049-179 ° S^0.5) In (RVP)	в	5,043.6		Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD SD	0.14	ID-MOIE/IT-Yr
	+ 0.6*TP + 0.005*a*1 (Eap. 1.28)	ті А	510.21	*P	Tank diamotor		50	125.00	11/112 ft
	+ 0.0 TB + 0.005 u T (Equation 1-20)	TAA	508.2	*P	Vapor pressur	e function: see Figure 7.1.19	D D*	0.13	ΝΔ
Liquid bulk temp	perature (Equation 1-31)	TB	500.2	*B	Average vano	r molecular weight: see Note 1 to Equation 1-21	Mv	62.00	lh/lh-mole
Tank paint solar	absorptance dimensionless Table 7 1-6	a	0.3		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	ĩ	1180.0						
	Average Daily Liguid Surface Temperature:		50.5	*F	Total Losses (Eg.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	11,021.96	lb/yr
							+		
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	inimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	509.09	*R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
0			Loss Factor						
Quanity of Each	n Fitting:	Qty	<u>Kf</u>	Source	_				
Access Hatch (B	30lted/Gasketed)	2	1.6	Table 7.1-12					
Automatic Gauge	e Halch (Bolled/Gaskeled)	0	2.8						
Somple Bine/Ma	Jill-Op; Gaskeled Silding Cover)	10	33.0	Table 7.1-12					
Stub Drain (Slit F	Eabric Seal 10% Open)	125	12.0	Table 7.1-12					
Vacuum Breaker	r (Weighted Mech. Actu : Gasketed)	123	6.2	Fg 2-7 & Table 7 1-12	_				
Slotted Guide-Pr	ole (Gasketed Sliding Cover w Sleeve/Winer)	0	8.3	Eq.2-7 & Table 7 1-12					
Leas		0	7 9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	_				
				İ -	_				
	Total deck fitting loss factor:	1	513.40	Eq. 2-6	_				
	• • • • • • • • • • • • • • • • • • •				_				
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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	32		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				ſ	
Description Aboveground Storage Tank									
INPUT DATA						CALCULATIONS			
				Units			Symbol		Units
		Symbo		Units	Rim Seal Losses (I	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	3,224.48	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft
Molecular weight	t	Μv	62	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.1	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	45.00		Seal-related w	ind speed exponent; see Table 7.1-8	n Dt	3.0	NA
Diameter		D	125.00	tt.	Vapor pressur	e function; see Figure 7.1-19	P^	0.13	NA
		NI	3,801,825	gailons		malagular weight: and Nato 1 to Equation 1.21	D	125.00	IL Ih/Ih molo
Turnovers			221 052 091	gallyr	Average vapo	: 0.4 for crude eile or 1 for other organic liquide	IVIV Ko	02.00	ID/ID-ITIOIE
Number of fixed	roof support columns	Q No	221,953,981	NA	FIGUUCI IACIO		κι.	1.00	INA
Effective column	diameter: 1 1 0 7 or 1 0	Fc	1 10	ft	Withdrawal losses	(Eq.2-19: WD=[((0.943)OCsWI)/D]*[1+(NcEc	-IW	364 35	lb/vr
Deck seam loss	per unit seam length factor: 0.0 or 0.14	KD	0.14	lb-mole/ft-vr	Annual throug	hout	0	5 284 619	bbl/vr
Zero wind speed	LR factor: see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft*vr	Shell clingage	factor: see Table 7.1-10	⊆ Cs	0.0015	bbl/1.000 ft2
Wind speed dep	endent LR factor: see Table 7.1-8	KRb	0.1	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	it wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	125.00	ft
Seal-related wind	d speed exponent; see Table 7.1-8	n	3.0	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure f	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	ed roof support columns	Nc	10.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam lengt	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	4,013.21	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitting loss factor; see Eq. 2-14		FF	513.40	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-21	Μv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
		•	11.014		Deale Ocean Lawrence		<u> </u>	0.440.04	H- 6
Eq from Fig 7.1-	15: 15:64-1.854"S^0.5 - (0.8742-0.3280 " S^0.5) In (RVP)	A	11.644		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P^MVKC)		3,419.91	ID/yr
Eq from Fig 7.1-	15: 8742-1042°S^0.5 - (1049-179 ° S^0.5) In (RVP)	в	5,043.0		Deck seam los	as per unit seam length factor, 0.0 or 0.14	KD SD	0.14	ID-MOIE/IL-yr
	+ 0.6*TP + 0.005*a*1 (Eap. 1.28)	ті А	510.21	*D	Tank diamotor	Igin lactor, Length of Sean / Area of Deck	50	125.00	10/11Z
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vanor pressur	e function: see Figure 7 1-19	P*	0.13	NA
Liquid bulk temp	perature (Equation 1-31)	TB	509.1	*R	Average vapo	molecular weight: see Note 1 to Equation 1-21	Mv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	1	1180.0			,			
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	11,021.96	lb/yr
						·			
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	inimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
									
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	тв	509.09	*R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
Quanity of Each	h Eiffing.	041	Loss Factor		_				
Quantity of Each	n Fitting:		<u>Kt</u>	Source					
Access Halch (B	e Hatch (Bolted/Casketed)	2	1.0	Table 7.1-12					
Column Well (Bu	ult In: Gasketed Sliding Cover)	10	2.0	Table 7.1-12	_				
Sample Pine/We	Micop, Basketed Bilding Bover)	2	12.0	Table 7 1-12					
Stub Drain (Slit F	Eabric Seal 10% Open)	125	12.0	Table 7 1-12					
Vacuum Breaker	r (Weighted Mech. Actu.: Gasketed)	1	62	Eq.2-7 & Table 7 1-12	_				
Slotted Guide-Po	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12	_				
Legs		0	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12					
					_				
	Total deck fitting loss factor:		513.40	Eq. 2-6					
			L						
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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	39		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Gasoline (Average RVP 13)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				ſ	
Description Aboveground Storage Tank									
INPUT DATA						CALCULATIONS			
				Units			Symbol		Units
		Symbo		Units	Rim Seal Losses (I	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	3,224.48	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft
Molecular weight	t	Μv	62	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.1	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	45.00	0	Seal-related w	ind speed exponent; see Table 7.1-8	n Dt	3.0	NA
Diameter		D	125.00	ft	Vapor pressure function; see Figure 7.1-19		P^	0.13	NA
		NI	3,073,373	galions		malagular weight: and Nato 1 to Equation 1.21	D	125.00	IL Ih/Ih molo
Turnovers			170 426 204	gallyr	Average vapo	: 0.4 for crude eile or 1 for other organic liquide	IVIV Ko	02.00	ID/ID-ITIOIE
Number of fixed	roof support columns	Q	1/9,420,294	gai/yi	Product lactor	, 0.4 for crude ons of 1 for other organic liquids	KC	1.00	INA
Effective column	diameter: 1 1 0 7 or 1 0	Fc	1 10	ft	Withdrawal losses	(Eq.2-19: WD=[((0.943)OCsWI)/D]*[1+(NcEc	-IW	270 72	lb/vr
Deck seam loss	per unit seam length factor: 0.0 or 0.14	KD	0.14	lb-mole/ft-vr	Annual throug	hout	0	4 272 055	bbl/vr
Zero wind speed	LR factor: see Table 7.1-8	KRa	3.3	lb-mole/(mph)nft*vr	Shell clingage	factor: see Table 7.1-10	⊆ Cs	0.0015	bbl/1.000 ft2
Wind speed dep	endent LR factor: see Table 7.1-8	KRb	0.1	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	125.00	ft
Seal-related wind	d speed exponent; see Table 7.1-8	n	3.0	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure f	function; see Figure 7.1-19	P*	0.126	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	ictor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	5.60	lb/gal					
Deck seam lengt	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	1,433.63	lb/yr
Average Reid Va	apor Pressure	RVP	13.00		Total deck fitting loss factor; see Eq. 2-14		FF	183.40	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.13	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-21	Μv	62.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	5.8026		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
		•	11.014		Deale Ocean Lawrence		<u> </u>	0.440.04	H- 6
Eq from Fig 7.1-	15: 15:04-1.854*S*U.5 - (U.8742-U.3280 * S*U.5) In (RVP)	A	11.644		Deck Seam Losses	$\frac{1}{6} (Eq.2-18: LD = KDSDD2P^{MVKC})$		3,419.91	ID/yr
Eq from Fig 7.1-	15: 8742-1042°S^0.5 - (1049-179 ° S^0.5) In (RVP)	в	5,043.0		Deck seam los	ss per unit seam length factor, 0.0 or 0.14	KD SD	0.14	ID-MOIE/IL-Yr
	+ 0.6*TB + 0.005*a*I (Fap. 1.28)	τι Δ	510.21	*P	Tank diameter		00	125.00	ft
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Vanor pressur	e function: see Figure 7 1-19	P*	0.13	NA
Liquid bulk temp	erature (Equation 1-31)	TB	509.1	*R	Average vapo	r molecular weight: see Note 1 to Equation 1-21	Mv	62.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless. Table 7.1-6	α	0.3		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0			,			
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	8,348.74	lb/yr
						·			
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	nimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
									
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	тв	509.09	*R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
Quanity of Each	h Eitting:	041	Loss Factor		_				
	Il Filling.		<u>NI</u>	Source					
Automatic Gauge	e Hatch (Bolted/Casketed)	2	1.0	Table 7.1-12					
Column Well (Bi	ult_In: Gasketed Sliding Cover)	0	2.0	Table 7.1-12					
Sample Pine/We	ell (Slit Eabric Seal 10% Open)	2	12.0	Table 7 1-12					
Stub Drain (Slit F	Eabric Seal 10% Open)	125	1.2	Table 7.1-12					
Vacuum Breaker	r (Weighted Mech, Actu.; Gasketed)	1	62	Eq.2-7 & Table 7.1-12	_				
Slotted Guide-Po	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12	_				
Legs		0	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12					
					_				
	Total deck fitting loss factor:		183.40	Eq. 2-6					
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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	117		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Component (Average RVP 14.33)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description	Aboveground Storage Tank								-
	INPUT DATA					CALCULATIONS			
				Units			Symbo	1	Units
							T		
		Symbo	l	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,557.95	lb-mole/ft*yr
Molecular Weigh	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf
Molecular weigh	nt	Μv	60.67	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data	1				Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related v	vind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	110.00	ft	Vapor pressu	e function; see Figure 7.1-19	P*	0.15	NA
Tank volume			2,743,229	gallons	Tank diamete	r	D	110.00	ft
Turnovers		Ν	15.38		Average vapo	r molecular weight; see Note 1 to Equation 1-2	.1Mv	60.67	lb/lb-mole
Throughput		Q	42,180,000	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	72.32	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	1,004,286	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	pendent LR factor; see Table 7.1-8	KRb	0.3	NA	Average orga	nic liquid density	WL	5.60	lb/gal
Average ambier	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diamete	r	D	110.00	ft
Seal-related win	nd speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bb
Vapor pressure	function; see Figure 7.1-19	P*	0.146	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colu	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	es (Eq.2-13: LF = FF P*MvKc)	LF	539.97	lb/yr
Average Reid V	apor Pressure	RVP	14.33		Total deck fitti	ng loss factor; see Eq. 2-14	FF	61.00	lb-mole/yr
Stock ASTM-D8	36 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressu	Vapor pressure function; see Figure 7.1-19		0.15	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.67	lb/lb-mole
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	6.4846		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
							<u> </u>		
Eq from Fig 7.1-	-15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.614		Deck Seam Losse	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	2,999.05	lb/yr
Eq from Fig 7.1-	-15: 8742-1042*S^0.5 - (1049-179 * S^0.5) In (RVP)	В	4,971.7		Deck seam lo	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam le	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Tank diamete		D	110.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressu	e function; see Figure 7.1-19	P*	0.15	NA
Liquid bulk temp	perature (Equation 1-31)	IB	509.1	*R	Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.67	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0				<u> </u>		
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)		5,169.30	lb/yr
TAA ((TA)() T		T • •	500.00	*5			<u> </u>	<u> </u>	<u> </u>
1AA = ((1AX+1/	AN)/2)	TAA	508.20	^R					
average daily m	aximum ambient temperature, Table 7.1-2	TAX	517.10	"R +D					
average daily m	inimum ampient temperature, Table 7.1-2	IAN	499.30	"R	U				
Liquid Dulls To a	percenture: Eq. 1.21: TP = TAA \downarrow 0.002 ms \downarrow	тр	F00.00	*D					
Total deals fitting	$\frac{1}{1000} = \frac{1}{1000} = 1$	ів	509.09	R					
Total deck nulling	1033 10001 USINY Equation 2-14, See Eq. 2-0		Loss Easter						
Quanity of Eco	h Fitting:	054		Course					
	n Fitting.		16	Table 7.1.12					
Access Hatch (E	ne Hatch (Bolted/Gasketed)	2	1.0	Table 7.1-12					
Column Wall /P	uilt-Un: Gesketed Sliding Cover)	0	2.0	Table 7 1-12					
Sample Bine/M/	all (Slit Eabria Soal 10% Open)	2	12.0	Table 7.1-12					
Stub Drain (Slit	Fabric Seal 10% Open)	22	12.0	Table 7 1-12					
Vacuum Breake	r Weighted Mech. Actu: Gasketed)	23	6.2	Fg 2-7 & Table 7 1-12					
Slotted Guide P	n (Weighted Wiech, Actu., Gasteled)	0	0.2 g g	Eq 2-7 & Table 7.1-12					
Leas	ore (Gasketed Gliding Gover w Greeve/wiper)	0	7.0	Table 7 1-12					
Legs		0	7.9 56.0	Table 7 1-12					
Ladder / Guide-	Pole Combination	0	60.0	Table 7 1-12					
Laddor / Guide-		, J	00.0						
	Total deck fitting loss factor:		61.00	Fa 2-6					
		<u> </u>	01.00						
1				1					

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	118		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Component (Average RVP 14.33)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description	Aboveground Storage Tank			•					
	INPUT DATA					CALCULATIONS			
				Units			Symbo	1	Units
							T		
		Symbo	<u> </u>	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,416.32	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf
Molecular weigh	ıt	Μv	60.67	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data	1				Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related v	vind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	100.00	ft	Vapor pressu	e function; see Figure 7.1-19	P*	0.15	NA
Tank volume			2,220,637	gallons	Tank diamete	r	D	100.00	ft
Turnovers		Ν	18.99		Average vapo	r molecular weight; see Note 1 to Equation 1-2	.1Mv	60.67	lb/lb-mole
Throughput		Q	42,180,000	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	79.55	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	1,004,286	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average orga	nic liquid density	WL	5.60	lb/gal
Average ambien	nt wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diamete	r	D	100.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bb
Vapor pressure	function; see Figure 7.1-19	P*	0.146	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colu	mn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	c liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	es (Eq.2-13: LF = FF P*MvKc)	LF	5,626.33	lb/yr
Average Reid Va	apor Pressure	RVP	14.33		Total deck fitti	ng loss factor; see Eq. 2-14	FF	635.60	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressu	Vapor pressure function; see Figure 7.1-19		0.15	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.67	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	6.4846		Product factor	; 0.4 for crude oils or 1 for other organic liquids	, Kc	1.00	NA
							<u> </u>		
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.614		Deck Seam Losse	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	2,478.56	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	4,971.7		Deck seam lo	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam le	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Tank diamete	r	D	100.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressu	e function; see Figure 7.1-19	P*	0.15	NA
Liquid bulk temp	perature (Equation 1-31)	IB	509.1	*R	Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.67	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	!-1 & 2-2: LT = LR+LW+LF+LD)		9,600.75	lb/yr
		T A A	500.00	10			<u> </u>	<u> </u>	
1AA = ((1AX+1A	AN)/2)	TAA	508.20	*R					
average daily m	aximum ambient temperature, Table 7.1-2	TAX	517.10	^R					
average daily m	inimum ambient temperature, Table 7.1-2	IAN	499.30	ŕR					
Linuid Dulls Terrs		TD	500.00	+D					
Liquid Buik Tem	perature; Eq. 1-31: $IB = IAA + 0.003 \text{ ds} I$	IB	509.09	"R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
Quantity of Fact	h Eitting.	04-1		0					
			<u>NI</u>	Toble 7.1.12					
Access Hatch (E	up Hateh (Belted/Gasketed)	2	1.0	Table 7.1-12					
Column Woll (P	uit Lin: Gosketed Sliding Cover)	0	2.0	Table 7.1-12					
Sample Pine/W/	all (Slit Fabric Soal 10% Open)	1	12.0	Table 7.1-12					
Stub Drain (Slit	Fahric Seal 10% Open)	80	12.0	Table 7 1-12					
Vacuum Breake	r (Weighted Mech. Actu: Gasketed)	1	6.2	Fa 2-7 & Table 7 1-12					
Slotted Guide P	nle (Gasketed Sliding Cover w Sleeve Miner)	0	0.2 g g	Eq 2.7 & Table 7.1-12					
		59	7.0	Table 7 1-12					
Legs			7.9 56.0	Table 7 1-12					
Ladder / Guide I	Pole Combination	1	60.0	Table 7 1-12					
		· ·	00.0						
	Total deck fitting loss factor:		635.60	Fa 2-6					
		1	000.00						
1									

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	119		Tank type Internal Floating Roof			Date			07/09/20		
Material stored	Component (Average RVP 14.33)		Company	Global		Performed by		Nicole Brower			
City	Albany		State	NY							
Description	Aboveground Storage Tank			•							
	INPUT DATA					CALCULATIONS					
				Units			Symbo		Units		
							T				
		Symbo	l	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,133.05	lb-mole/ft*yr		
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf		
Molecular weigh	t	Μv	60.67	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA		
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph		
Shell height		Hs	48.00		Seal-related w	vind speed exponent; see Table 7.1-8	n	1.6	NA		
Diameter		D	80.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.15	NA		
Tank volume			1,434,161	gallons	Tank diamete	r	D	80.00	ft		
Turnovers		Ν	29.41		Average vapo	r molecular weight; see Note 1 to Equation 1-2	.1Mv	60.67	lb/lb-mole		
Throughput		Q	42,180,000	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	s Kc	1.00	NA		
Number of fixed	roof support columns	Nc	0.00	NA							
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	99.44	lb/yr		
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	1,004,286	bbl/yr		
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2		
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	5.60	lb/gal		
Average ambien	it wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diamete	r	D	80.00	ft		
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bb		
Vapor pressure	function; see Figure 7.1-19	P*	0.146	NA	Number of fixe	ed roof support columns	Nc	0.00	NA		
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft		
Average organic	liquid density	WL	5.60	lb/gal							
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	es (Eq.2-13: LF = FF P*MvKc)	LF	4,061.65	lb/yr		
Average Reid Va	apor Pressure	RVP	14.33		Total deck fitti	ng loss factor; see Eq. 2-14	FF	458.84	lb-mole/yr		
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.15	NA		
					Average vapo	Average vapor molecular weight; see Note 1 to Equation 1-2		60.67	lb/lb-mole		
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	6.4846		Product factor	; 0.4 for crude oils or 1 for other organic liquids	; Kc	1.00	NA		
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.614		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	1,586.28	lb/yr		
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	4,971.7		Deck seam lo	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr		
					Deck seam le	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2		
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Tank diamete		D	80.00	ft		
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.15	NA		
Liquid bulk temp	perature (Equation 1-31)	IB	509.1	*R	Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.67	lb/lb-mole		
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA		
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0				<u> </u>				
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)		6,880.42	lb/yr		
		T A A	500.00	*0			<u> </u>	<u></u>	<u> </u>		
IAA = ((IAX+IA)	AN)/2)	TAA	508.20	^R							
average daily m	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R							
average daily m	inimum amplent temperature, Table 7.1-2	TAN	499.30	ĸ							
Liquid Dulls Torr	poreture: Eq. 1.21: TD = TAA + 0.002 me L	то	F00.00	*D							
	perature, Eq. (-31: TB = TAA + 0.003 dS I	тв	509.09	7							
TOTAL DECK TITLING	1055 100101 USING EQUALION 2-14, SEE EQ. 2-0		Loss Fester								
Quantity of Fact	h Eitting.	04-1									
	n Filling.		<u>KI</u>	Source Table 7.1.12							
Access Hatch (E	A Hatch (Rolted/Gaskotod)	2	1.0	Table 7.1-12							
Column Woll (P	uit Up: Gacketed Sliding Cover)	0	2.0	Table 7.1-12							
Sample Pine/W/	all (Slit Eabria Soal 10% Open)	1	12.0	Table 7.1-12							
Stub Drain (Slit	En joint abric Seal 10% Open)	51	12.0	Table 7 1-12							
Vacuum Breako	r (Weighted Mech. Actu: Gasketed)	1	1.2	Fa 2-7 & Table 7 1-12							
Slotted Guide P	n (Molynica Mech. Acia., Oaskelea) ole (Gasketed Sliding Cover w Sleeve Miner)	0	0.2 g g	Eq.2-7 & Table 7.1-12							
		40	7.0	Table 7 1-12							
Legs		40	7.9 56.0	Table 7 1-12							
Ladder / Guido I	Pole Combination	1	60.0	Table 7 1-12							
		- ·	00.0	10010 1.1-12							
	Total dock fitting loss factor:		458 84	Fa 2-6							
	Total deck fitting loss factor.	<u> </u>	-00.04	L-4 V							
				1							

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	121		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Blendstock (Average RVP 15)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY		-			
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
				Units			Symbo		Units
		Symbo	I	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	2,254.95	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weigh	t	Μv	60	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambi	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	150.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.16	NA
Tank volume			5,105,286	gallons	Tank diameter		D	150.00	ft
Turnovers		N	37.22		Average vapor	r molecular weight; see Note 1 to Equation 1-2	Mv	60.00	lb/lb-mole
Throughput		Q	190,000,000	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	238.89	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	4,523,810	bbl/yr
Zero wind speed	LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	5.60	lb/gal
Average ambien	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	150.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl
Vapor pressure	function; see Figure 7.1-19	P*	0.157	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	9,780.83	lb/yr
Average Reid Va	apor Pressure	RVP	15.00		Total deck fitti	ng loss factor; see Eq. 2-14	FF	1,041.00	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressur	e function; see Figure 7.1-19	P*	0.16	NA
					Average vapor	r molecular weight; see Note 1 to Equation 1-2	Μv	60.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	6.8317		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.600		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	5,919.23	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	4,937.9		Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA ·	+ 0.6*TB + 0.005*α*l (Eqn. 1-28)	TLA	510.21	*R	Tank diameter	•	D	150.00	ft
Average daily ar	nbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.16	NA
Liquid bulk temp	erature (Equation 1-31)	ТВ	509.1	*R	Average vapor	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	18,193.90	lb/yr
									<u> </u>
TAA = ((TAX+TA)	AN)/2)	TAA	508.20	*R					
average daily m	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily m	inimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
Liquid Bulk Tem	perature; Eq 1-31: $IB = IAA + 0.003 \alpha s I$	IB	509.09	*R					
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
			Loss Factor						
Quanity of Eac	n Fitting:	Qty	<u>Kt</u>	Source					
Access Hatch (E	solied/Gasketed)	2	1.6	Table 7.1-12					
Automatic Gaug	e Hatch (Bolted/Gasketed)	1	2.8	Table 7.1-12					
Column Well (Bi	Jilt-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12					
Sample Pipe/We	en (on Faund Sear 10% Open)	1	12.0	Table 7.1-12					
Vacuum Brocks	r (Mojahtad Mach. Actus Gaskatad)	00	1.2	Table 7.1-12					
Vacuum Breake	r (weighteu Mech. Actu.; Gaskeleu)	1	6.2	Eq.2-7 & Table 7.1-12					
	ore (Gaskeled Shulling Cover & Sleeve/wiper)	112	8.3	E4.2-7 & Table 7.1-12					
Leys		112	7.9	Table 7.1-12					
Laddor / Cuida /	Polo Combination	0	0.00	Table 7.1-12					
		<u> </u>	00.0						
 	Total dock fitting loss factor:	<u> </u>	1 0/1 00	Fg. 2-6					
			1,041.00						

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<u>Table 1</u>
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	114		Tank type	type Internal Floating Roof		Date		07/09/20	
Material stored	Blendstock (Average RVP 15)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description	Aboveground Storage Tank			•					
	INPUT DATA					CALCULATIONS			
				Units			Symbo	1	Units
							T		
		Symbo	l	Units	Rim Seal Losses (Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,803.96	lb-mole/ft*yr
Molecular Weight	t				Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf
Molecular weigh	t	Μv	60	Lb/lb-mole	Wind speed d	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average amb	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related v	vind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	120.00	ft	Vapor pressu	re function; see Figure 7.1-19	P*	0.16	NA
Tank volume			3,787,905	gallons	Tank diamete	r	D	120.00	ft
Turnovers		Ν	25.08		Average vapo	r molecular weight; see Note 1 to Equation 1-2	.1Mv	60.00	lb/lb-mole
Throughput		Q	95,000,000	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	149.31	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	2,261,905	bbl/yr
Zero wind speed	d LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average orga	nic liquid density	WL	5.60	lb/gal
Average ambien	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diamete	r	D	120.00	ft
Seal-related win	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bb
Vapor pressure	function; see Figure 7.1-19	P*	0.157	NA	Number of fix	ed roof support columns	Nc	0.00	NA
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	Effective colu	mn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	5.60	lb/gal					
Deck seam leng	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	es (Eq.2-13: LF = FF P*MvKc)	LF	1,612.66	lb/yr
Average Reid Va	apor Pressure	RVP	15.00		Total deck fitt	ng loss factor; see Eq. 2-14	FF	171.64	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressu	Vapor pressure function; see Figure 7.1-19		0.16	NA
					Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	6.8317		Product factor	; 0.4 for crude oils or 1 for other organic liquids	, Kc	1.00	NA
							<u> </u>		
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	A	11.600		Deck Seam Losse	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	3,788.31	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	4,937.9		Deck seam lo	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
					Deck seam le	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA -	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Tank diamete	r	D	120.00	ft
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressu	re function; see Figure 7.1-19	P*	0.16	NA
Liquid bulk temp	perature (Equation 1-31)	IB	509.1	*R	Average vapo	r molecular weight; see Note 1 to Equation 1-2	1Mv	60.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor	; 0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0				<u> </u>		
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2	2-1 & 2-2: LT = LR+LW+LF+LD)		7,354.24	lb/yr
		T A A	500.00	*5			<u> </u>	<u> </u>	
IAA = ((IAX+IA)	AN)/2)	TAA	508.20	^R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	"R +D					
average daily mi	inimum ampient temperature, Table 7.1-2	IAN	499.30	"R					
Liquid Dully Taxa	poreture: Eq. 1.21: TD = TAA + 0.002 me L	то	F00.00	*D					
Total deals fitting	perature, Eq. (-31: TB = TAA + 0.003 dS I loss factor using Equation 2.14: see Eq. 2.6	тв	509.09	R					
Total deck mung	1033 100101 USING Equation 2-14, See Eq. 2-0		Loss Easter						
Quanity of East	h Fitting.	054		Course					
	Roltod/Gacketed)		16	Table 7.1.12					
Automatic Gaug	e Hatch (Bolted/Gasketed)	2	1.0	Table 7.1-12					
Column Woll (P	uit Up: Gacketed Sliding Cover)	0	2.0	Table 7.1-12					
Sample Pine/W/	all (Slit Eabria Soal 10% Open)	2	12.0	Table 7.1-12					
Stub Drain (Slit	Fahric Seal 10% Open)	115	12.0	Table 7 1-12					
Vacuum Breake	r (Weighted Mech. Actu : Gasketed)	1	6.2	Fg 2-7 & Table 7 1-12					
Slotted Guide P	n (Molynica Mech. Acia., Oaskelea) ole (Gasketed Sliding Cover w Sleeve Miner)	0	0.2 g g	Eq 2-7 & Table 7.1-12					
		0	7.0	Table 7 1-12					
Legs		0	7.9 56.0	Table 7 1-12					
Ladder / Guido I	Pole Combination	0	60.0	Table 7 1-12					
			00.0						
	Total dock fitting loss factor:		171 64	Ea 2-6					
		<u> </u>	171.04	<u></u>					
		1		1					

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Table 1						
TANK EMISSION CALCULATION						
(Note - Cells in pink are input cells. All other cells are calculated cells.)						

Tank No.	115		Tank type	Internal Floating Roof		Date		07/09/20	
Material stored	Blendstock (Average RVP 15)		Company	Global		Performed by		Nicole Brower	
City	Albany		State	NY					
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
				Units			Symbol	<u> </u>	Units
		Symbo	1	Units	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	2,254.95	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weight	t	Мv	60	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	48.00	-	Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	150.00	n	Vapor pressur	e function; see Figure 7.1-19	P*	0.16	NA
Tank volume			5,642,527	gallons	l ank diameter		D	150.00	π
Turnovers		N	16.84		Average vapor	molecular weight; see Note 1 to Equation 1-21	IVIV	60.00	ID/ID-mole
I nrougnput		Q	95,000,000	gai/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	KC	1.00	NA
Number of fixed			0.00	nA A			- 1.14/	140.45	16.6.12
Effective column	I diameter; 1.1, 0.7, or 1.0	FC	1.10	IL Ib molo/ft \r	Appual through	(Eq.2-19: LWD=[((0.943)QCSWL)/D]*[1+(NCF0		119.45	ID/yr
Zero wind enood	LI B factor: soo Table 7.1.9	KD KDa	0.14	ID-ITIOIe/II-yi	Sholl clingage	factor: soo Table 7.1.10	Q	2,201,905	bbl/yi
Wind speed dop	endent I R factor: see Table 7.1-0	KRh	1.0			nic liquid density	WI	5.0015	lb/gal
Average ambien	t wind speed at tank site: if IFR use Zero	V	0.0	mph	Tank diameter		D	150.00	ft
Seal-related win	d speed exponent: see Table 7 1-8	n	1.6	NA	Constant		0.943	0.94	1 000 ft3*gal/bbl
Vapor pressure f	function: see Figure 7 1-19	P*	0 157	NA	Number of fixe	d roof support columns	Nc	0.01	NA
Shell clingage fa	ictor: see Table 7 1-10	Cs	0.0015	bbl/1 000 ft2	Effective colum	nn diameter: 1 1 0 7 or 1 0	Fc	1 10	ft
Average organic	liquid density	WL	5.60	lb/gal	2.1000.10 00101				
Deck seam lengt	th factor: Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Ea.2-13: LF = FF P*MvKc)	LF	2.343.26	lb/vr
Average Reid Va	apor Pressure	RVP	15.00		Total deck fittin	ng loss factor; see Eq. 2-14	FF	249.40	lb-mole/yr
Stock ASTM-D8	6 Distillation Slope at 10vol% evaporation (*F/vol%)	S	3.00		Vapor pressure function; see Figure 7.1-19		P*	0.16	NA
					Average vapor molecular weight; see Note 1 to Equation 1-21			60.00	lb/lb-mole
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	6.8317		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
						- · · ·			
Eq from Fig 7.1-	15: 15.64-1.854*S^0.5 - (0.8742-0.3280 * S^0.5) ln (RVP)	А	11.600		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	5,919.23	lb/yr
Eq from Fig 7.1-	15: 8742-1042*S^0.5 - (1049-179 * S^0.5) ln (RVP)	В	4,937.9		Deck seam loss per unit seam length factor; 0.0 or 0.14		KD	0.14	lb-mole/ft-yr
					Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*l (Eqn. 1-28)	TLA	510.21	*R	Tank diameter		D	150.00	ft
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Vapor pressure	e function; see Figure 7.1-19	P*	0.16	NA
Liquid bulk temp	erature (Equation 1-31)	тв	509.1	*R	Average vapor	molecular weight; see Note 1 to Equation 1-21	Μv	60.00	lb/lb-mole
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	1.00	NA
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0						
	Average Daily Liquid Surface Temperature:		50.5	*F	Total Losses (Eq.2-	-1 & 2-2: LT = LR+LW+LF+LD)	LT	10,636.89	lb/yr
TAA = ((TAX) + TAX)		T A A	500.00	*D					<u> </u>
IAA = ((IAX+IA)	AN//2)		508.20	*R *D	-				
average daily ma	nimum ambient temperature. Table 7.1-2		400.30	к *D	-				
average daily fill		TAN	499.30	ĸ	Ш				
Liquid Bulk Tem	perature: Eq. 1-31: TR = TAA + 0.003 qs.	TB	509.09	*R	П				
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6	10	000.00	IX					
. otal abor intilly		ł	Loss Factor		_				
Quanity of Each	n Fitting:	Otv	Kf	Source	_				
Access Hatch (B	olted/Gasketed)	2	1.6	Table 7.1-12	_				
Automatic Gauge	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	_				
Column Well (Bu	uilt-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12	_				
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	2	12.0	Table 7.1-12	_				
Stub Drain (Slit F	Fabric Seal 10% Open)	180	1.2	Table 7.1-12	_				
Vacuum Breaker	r (Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-12	_				
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-12	_				
Legs		0	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12					
					_				
	Total deck fitting loss factor:		249.40	Eq. 2-6	_				
		L	ļ		_				
		L			_				
1		1	1						

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	117		Tank type	Internal Floating R	oof Date			07/09/20		
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r	
City	Albany		State	NY						
Description	Aboveground Storage Tank			•						
	INPUT DATA					CALCULATIONS				
				Units			Symbo		Units	
		Symbo		Units	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	787.28	lb-mole/ft*yr	
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*	
Molecular weight	Molecular weight		50	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA	
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	v	0.0	mph	
Shell height		Hs	48.00		Seal-related wind speed exponent; see Table 7.1-8 r		n	1.6	NA	
Diameter		D	110.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.22	NA	
Tank volume			2,743,229	gallons	Tank diameter		D	110.00	ft	
Turnovers		Ν	13.62		Average vapor	molecular weight; see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole	
Throughput	-	Q	37,360,542	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA	
Number of fixed	roof support columns	Nc	0.00	NA						
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	LW	324.86	lb/yr	
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual through	nput	Q	889,537	bbl/yr	
Zero wind speed	I LR factor; see Table 7.1-8	кка	1.6	ib-mole/(mpn)nπ^yr	Shell clingage	factor; see Table 7.1-10	CS	0.0060	bbl/1,000 π2	
wind speed dep	endent LK factor; see Table 7.1-8	KKD	0.3	NA mph	Average organ	nic liquia density	VVL	/.10	ib/gai	
Average amplen	t wind speed at tank site, if IFR use Zero	v	0.0	прп			0.040	110.00	1 000 #2*~~1/6-10	
Seal-related wind	u speed exponent, see Table 7.1-8	П D*	1.0	NA	Constant Number of five	d roof our port columns	0.943	0.94	1,000 ILS gal/0012	
Sholl olingogo fo	iunclion, see Figure 7.1-19	P	0.224	NA hhl/1.000.#2	Ffootive column	an diameter: 1.1.0.7. or 1.0	INC Eo	0.00	INA #	
Shell clingage la	liquid density		0.0060	001/1,000 1t2	Ellective colum		FC	1.10	IL	
Average organic	th factor: Longth of Soam / Aroa of Dock	SD SD	7.10	10/yai #/#2	Dock Fitting Losso	s (Eq. 2.13: E = EE D*My/Ka)	1 5	272.86	lb/ur	
Average Reid Va	anor Pressure	RVP	12 50		Total deck fitti	a loss factor: see Eq. 2-14	FF	61.00	lb-mole/vr	
Average iteld va			12.50		Vapor prossure function: soo Figure 7.1.10		D*	01.00	NA	
Equation 1-25 P	$v(\Delta = \exp(\Delta_{-}(B/T \Delta))$	ΡνΔ	8 7173			molecular weight: see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole	
		1 1/1	0.7170		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA	
Ea from Fig 7.1-	16: 12.82 - 0.9672 ln (RVP)	А	10.377							
Eq from Fig 7.1-	16: 7261 - 1216 ln (RVP)	В	4.189.7		Deck Seam Losses	Deck Seam Losses (Eq.2-18: LD = KDSDD2P*MvKc)		1.515.51	lb/vr	
			,		Deck seam los	s per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Tank diameter	· · · · · · · · · · · · · · · · · · ·	D	110.00	ft	
Liquid bulk temp	erature (Equation 1-31)	TB	509.1	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.22	NA	
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	molecular weight; see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole	
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA	
	Average Daily Liquid Surface Temperature:		50.5	*F						
					Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	2,900.51	lb/yr	
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R						
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R						
average daily mi	nimum ambient temperature, Table 7.1-2	IAN	499.30	*R	<u>l</u>					
		TD	500.00	*0	Π					
Liquid Bulk Tem	perature; Eq 1-31: IB = IAA + 0.003 αs I	IB	509.09	ŕR	Ш					
Total deck fitting	ioss factor using Equation 2-14; see Eq. 2-6		Loss Faster		-					
Quanity of Each	- Fitting	054		Source	-					
Access Hatch (B	alted/Gasketed)		16	Table 7 1-12	-					
Automatic Gauge	e Hatch (Bolted/Gasketed)		1.0	Table 7.1-12	-					
Column Well (Bi	illt-Up: Gasketed Sliding Cover)	ő	33.0	Table 7 1-12	-					
Sample Pine/We	ell (Slit Fabric Seal 10% Open)	2	12 0	Table 7.1-12	_					
Stub Drain (Slit F	Fabric Seal 10% Open)	23	12.0	Table 7.1-12	-					
Vacuum Breaker	r (Weighted Mech. Actu.; Gasketed)	1	6.2	Eg.2-7 & Table 7 1-	12					
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-	12					
Legs		0	7.9	Table 7.1-12	-					
Ladder		0	56.0	Table 7.1-12	-					
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	-					
					_					
	Total deck fitting loss factor:		61.00	Eq. 2-6	-					
					1					

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	118		Tank type	Internal Floating R	oof Date			07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY					
Description	Aboveground Storage Tank			•					
	INPUT DATA		n			CALCULATIONS			
				Units			Symbol		Units
		Symbol		Units	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	715.71	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*
Molecular weight		Mv	50	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	48.00		Seal-related w	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	100.00	ft	Vapor pressur	e function; see Figure 7.1-19	P*	0.22	NA
Tank volume			2,220,637	gallons	Tank diameter		D	100.00	ft
Turnovers		N	13.62		Average vapor	molecular weight; see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole
Throughput		Q	30,243,265	gal/yr	Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Number of fixed	roof support columns	Nc	0.00	NA					
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	٥LW	289.27	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual throug	hput	Q	720,078	bbl/yr
Zero wind speed	LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2
Wind speed depe	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	7.10	lb/gal
Average ambient	wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	100.00	ft
Seal-related wind	speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl2
Vapor pressure f	unction; see Figure 7.1-19	P*	0.224	NA	Number of fixe	d roof support columns	Nc	0.00	NA
Shell clingage fa	ctor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2	Effective colum	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	7.10	lb/gal					
Deck seam lengt	h factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)		2,843.15	lb/yr
Average Reid Va	por Pressure	RVP	12.50		l otal deck fitti	ng loss factor; see Eq. 2-14	FF D±	635.60	lb-mole/yr
E			0 7470		Vapor pressur	e function; see Figure 7.1-19	P*	0.22	NA
Equation 1-25 PV	$A = \exp(A - (B/ILA))$	PVA	8.7173		Average vapor	molecular weight; see Note 1 to Equation 1-2		50.00	ID/ID-mole
Ea from Fig 7.1.4		^	10.077		Product lactor	, 0.4 for crude ons of 1 for other organic liquids	KC.	0.40	NA
Eq from Fig 7.1-	16: 12.82 - 0.9672 IN (RVP)	A	10.377				1.5	4 252 40	lla /um
Eq Irom Fig 7.1-	16. 7201 - 1210 III (RVP)	в	4,189.7		Deck Seam Losses	$(Eq.2-18: LD = KDSDD2P^{-}MVKC)$		1,252.49	ID/yi lb.molo/ft.vr
T = 0.4 T A A	$0.6*TP \pm 0.005*a*1 (Eap. 1.28)$		E40.04	*D	Deck seam los	ath factor: Longth of Soom (Area of Dock	RD RD	0.14	fl/fl/fl/fl-yi
	biont tomporature (Equation 1.30)		510.21	к *D	Tank diamotor	Igin factor, Length of Seath / Area of Deck	30	100.00	11/112 ft
Liquid bulk tomp	prature (Equation 1.31)		500.2	*D	Vapor proseur	o function: soo Figuro 7.1.10	D*	0.22	NA
Tank paint solar	absorptance dimensionless Table 7.1-6	a	0.3	n.		r molecular weight: see Note 1 to Equation 1-2	Г 1 Му	50.00	lh/lh-mole
Daily total solar i	nsolation on a horizontal surface Btu/(ft2 day)	u I	1180.0		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	
Dully total solar h	Average Daily Liquid Surface Temperature:		50.5	*F				0.40	
	Average Baily Elquid Callade Temperature.		00.0	•	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	5,100,62	lb/vr
TAA = ((TAX+TA	N)/2)	TAA	508.20	*R				-,	
average daily ma	iximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily min	nimum ambient temperature, Table 7.1-2	TAN	499.30	*R	1				
					4				
Liquid Bulk Temp	perature; Eq 1-31: TB = TAA + 0.003 αs I	TB	509.09	*R	1				
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
			Loss Factor		_				
Quanity of Each	Fitting:	Qty	Kf	Source	_				
Access Hatch (B	olted/Gasketed)	2	1.6	Table 7.1-12	_				
Automatic Gauge	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	_				
Column Well (Bu	ilt-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12	_				
Sample Pipe/We	II (Slit Fabric Seal 10% Open)	1	12.0	Table 7.1-12	_				
Stub Drain (Slit F	abric Seal 10% Open)	80	1.2	Table 7.1-12					
Vacuum Breaker	(Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-	12				
Slotted Guide-Po	le (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-	<u>1</u> 2				
Legs		58	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-F	ole Combination	1	60.0	1 able 7.1-12	-				
	Total dask fitting lass fastar		60E 60	Ea 2.6	-				
	i otal deck fitting loss factor:		035.00	Ly. 2-0	ח				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	119		Tank type	Internal Floating R	oof	Date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global	Performed by			Nicole Browe	r
City	Albany		State	NY					
Description	Description Aboveground Storage Tank								
	INPUT DATA				CALCULATIONS				
				Units			Symbo		Units
		Symbo		Units	Rim Seal Losses (E	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	572.57	lb-mole/ft*yr
Molecular Weight					Zero wind spe	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weight	Molecular weight M		50	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related wind speed exponent; see Table 7.1-8 n		n	1.6	NA
Diameter		D	80.00	ft	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank volume			1,434,161	gallons	Tank diameter		D	80.00	ft
Turnovers		N	13.62		Average vapor	molecular weight; see Note 1 to Equation 1-2	IMv	50.00	lb/lb-mole
Throughput	- · · ·	Q	19,532,103	gal/yr	Product factor;	; 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Number of fixed i	oof support columns	Nc	0.00	NA					
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF		233.52	lb/yr
Deck seam loss	ber unit seam length factor; 0.0 or 0.14	KD	0.14	Ib-mole/ft-yr	Annual through	nput	Q	465,050	bbl/yr
∠ero wind speed	LK TACTOF; SEE I ADIE 7.1-8	кка	1.6	ib-mole/(mpn)nft*yr	Snell clingage	Tactor; see I able 7.1-10	US	0.0060	DDI/1,000 ft2
vvina speed depe	endent LK factor; see Table /.1-8	KKD	0.3	NA	Average organ	nic liquia density	VVL	/.10	ib/gai
Average ambient	wind speed at tank site, if IFR use Zero	v	0.0	прп	Canatant		0.042	80.00	1000 #2*~al/bb/
Vapor processor f	i speeu exponent, see Table 7.1-8	11 D*	1.6		Number of five	d roof support columns	0.943	0.94	1,000 It3"gal/001
Sholl clingage far	anclion, see Figure 7.1-19	F Cc	0.224	NA bbl/1.000.#2	Effective column	an diameter: 1,1,0,7, or 1,0	INC Ec	0.00	INA ff
	liquid dopoity	US M/I	0.0060	bbi/1,000 itz	Ellective coluit		FC	1.10	IL
Deck seam lengt	h factor: Length of Seam / Area of Deck	SD	7.10	10/yai ft/ft2	Dock Fitting Losso	e (Eq. 2-13: E = EE D*MyKc)	IE	2 052 47	lb/vr
Average Reid Va	nor Pressure	SD RVP	12 50	10112	Total deck fittir	a loss factor: see Eq. 2-14	FF	458.84	lb-mole/vr
Average Neid Va	por riessure		12.50		Vapor prossure function: see Eq. 2-14		D*	-30.04	NA
Equation 1-25 Pv	$\Delta = \exp(\Delta_{-}(B/T \Delta))$	ΡνΔ	8 7173		Average vapor molecular weight: see Note 1 to Equation 1-21		I Mv	50.00	lb/lb-mole
Equation 1201		1 1/1	0.7170		Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Ea from Fig 7.1-1	6: 12.82 - 0.9672 ln (RVP)	А	10.377					0.10	
Eq from Fig 7.1-1	6: 7261 - 1216 ln (RVP)	В	4.189.7		Deck Seam Losses (Eq.2-18: LD = KDSDD2P*MvKc)		LD	801.59	lb/vr
		-	.,		Deck seam los	Deck seam loss per unit seam length factor: 0.0 or 0.14		0.14	lb-mole/ft-vr
TLA = 0.4*TAA +	0.6*TB + 0.005*α*l (Ean. 1-28)	TLA	510.21	*R	Deck seam ler	high factor: Length of Seam / Area of Deck	SD	0.20	ft/ft2
Average daily am	bient temperature (Equation 1-30)	TAA	508.2	*R	Tank diameter		D	80.00	ft
Liquid bulk tempe	erature (Equation 1-31)	ТВ	509.1	*R	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	molecular weight; see Note 1 to Equation 1-2	ΙMv	50.00	lb/lb-mole
Daily total solar in	nsolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
	Average Daily Liquid Surface Temperature:		50.5	*F		• · · ·			
					Total Losses (Eq.2-	-1 & 2-2: LT = LR+LW+LF+LD)	LT	3,660.16	lb/yr
TAA = ((TAX+TA	N)/2)	TAA	508.20	*R					
average daily ma	ximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mir	nimum ambient temperature, Table 7.1-2	TAN	499.30	*R	l				
					Π				
Liquid Bulk Temp	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	509.09	*R	l				
Total deck fitting	oss factor using Equation 2-14; see Eq. 2-6				-				
		<u> </u>	Loss Factor		-				
Quanity of Each	Fitting:	Qty	<u>Kf</u>	Source	_				
Access Hatch (B	Dited/Gasketed)	2	1.6	Table 7.1-12	-				
Automatic Gauge	Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	-				
Column Well (Bu	III-Up; Gasketed Sliding Cover)	0	33.0	Table 7.1-12	-				
Sample Pipe/We	II (SIIT FADRIC Seal 10% Open)	1	12.0	Table 7.1-12	-				
Stud Drain (Slit F	abilic Seal 10% Open)	51	1.2	Table 7.1-12	10				
Vacuum Breaker	(weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-	12				
	ie (Gaskeled Silding Gover w Sleeve/wiper)	0	8.3	Eq.2-1 & Table 7.1-	12				
Legs		40	7.9	Table 7.1-12	-				
Lauuer	ole Combination	1	0.00	Table 7.1-12	-				
Lauder / Guide-P		· ·	00.0		-				
	Total deck fitting loss factor	1	158 81	Ea 2-6	-				
	Total deck fitting 1055 lactor.	-	+00.04	-4· - V	Π				

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<u>Table 1</u> <u>TANK EMISSION CALCULATION</u> (Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	120		Tank type	Internal Floating R	oof	Date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				 	
Description	Aboveground Storage Tank							<u> </u>	
	INPUT DATA					CALCULATIONS			
				Units			Symbol		Units
								L	
		Symbo	l	Units	Rim Seal Losses (E	q.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	572.57	lb-mole/ft*yr
Molecular Weight					Zero wind spee	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*
Molecular weight	t	Μv	50	Lb/lb-mole	Wind speed de	pendent LR factor; see Table 7.1-8	KRb	0.3	NA
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	v	0.0	mph
Shell height		Hs	48.00		Seal-related wi	nd speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	80.00	ft	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank volume			1,430,858	gallons	Tank diameter		D	80.00	ft
Turnovers		Ν	13.62		Average vapor	molecular weight; see Note 1 to Equation 1-2	ΙMv	50.00	lb/lb-mole
Throughput		Q	19,487,119	gal/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Number of fixed i	roof support columns	Nc	0.00	NA					
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses ((Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	dLW	232.99	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual through	iput	Q	463,979	bbl/yr
Zero wind speed	LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2
Wind speed depe	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organi	ic liquid density	WL	7.10	lb/gal
Average ambient	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	80.00	ft
Seal-related wind	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl2
Vapor pressure f	function; see Eq. 2-4	P*	0.224	NA	Number of fixed	d roof support columns	Nc	0.00	NA
Shell clingage fac	ctor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2	Effective colum	n diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	7.10	lb/gal					
Deck seam lengt	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losses	s (Eq.2-13: LF = FF P*MvKc)	LF	2,052.47	lb/yr
Average Reid Va	apor Pressure	RVP	12.50		Total deck fittin	g loss factor; see Eq. 2-14	FF	458.84	lb-mole/yr
					Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Equation 1-25 Pv	vA = exp(A-(B/TLA))	PvA	8.7173		Average vapor	molecular weight; see Note 1 to Equation 1-27	ΙMv	50.00	lb/lb-mole
					Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Eq from Fig 7.1-1	16: 12.82 - 0.9672 ln (RVP)	А	10.377					P	
Eq from Fig 7.1-1	16: 7261 - 1216 ln (RVP)	В	4,189.7		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	801.59	lb/yr
					Deck seam los	s per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Deck seam len	gth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
Average daily am	nbient temperature (Equation 1-30)	TAA	508.2	*R	Tank diameter		D	80.00	ft
Liquid bulk tempe	erature (Equation 1-31)	TB	509.1	*R	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	molecular weight; see Note 1 to Equation 1-21	ΙMv	50.00	lb/lb-mole
Daily total solar in	nsolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
	Average Daily Liquid Surface Temperature:		50.5	*F					
					Total Losses (Eq.2-	1 & 2-2: LT = LR+LW+LF+LD)	LT	3,659.62	lb/yr
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily min	nimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
					u				
Liquid Bulk Temp	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	509.09	*R	T				
	· · · · ·				u				
Equation 1-25 Pv	vA = exp(A-(B/TLA))	PvA	5.8042		-				
					-				
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I	TLA	510.21	*R	T				
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	1				
Liquid bulk tempe	erature (Equation 1-31)	ТВ	509.1	*R	1				
Tank paint solar	absorptance, dimensionless. Table 7.1-6	α	0.3	1	1				
Daily total solar in	nsolation on a horizontal surface. Btu/(ft2 dav)	i	1180.0	1	1				
. ,	Average Daily Liquid Surface Temperature:	1	50.5	*F	1				
	singe - my manage remperature.	1	00.0	1	Ш				
TAA = ((TAX+TA	N)/2)	TAA	508.20	*R	Π				
average daily ma	aximum ambient temperature Table 7 1-2	TAX	517 10	*R	1				
average daily mi	nimum ambient temperature Table 7 1-2	TAN	499.30	*R	1				
are age daily fill			400.00	1	Ш				
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 gs I	тв	509.09	*R	Π				
	porataro, Eq. (01. 12 (AA (0.000 do)		503.08						
Total deck fitting	loss factor using Equation 2-14: see Eq. 2.6	1		1					
i otal deck littilly	1000 100101 using Equation 2-14, see Eq. 2-0	1	Loss Factor	1					
Quanity of Each	Fitting	044		Source					
	in Fitting.		<u>NI</u>	Source Table 7.1.12					
Automatia Course	ulicu/GdSKEleu)		1.0	Table 7.1-12					
Column Woll (De		0	2.8	Table 7.1-12					
Column well (Bu	III-Op, Gaskeled Silding Cover)	U	33.0		1				
Sample Pipe/We	en (Sint Fabric Seal 10% Open)	1	12.0	Table 7.1-12	1				
Stub Drain (Slit F	-apric Seal 10% Open)	51	1.2	1 able /.1-12					
Vacuum Breaker	(vveignted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-	12				
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-	12				
Legs		40	7.9	Table 7.1-12					
Ladder		0	56.0	Table 7.1-12					
Ladder / Guide-P	Pole Combination	1	60.0	Table 7.1-12					
il									
l	Total deck fitting loss factor:		458.84	Eq. 2-6					
		1 -			1				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	121		Tank type	Internal Floating R	oof	Date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global	Performed by			Nicole Browe	r
City	Albany		State	NY					-
Description	Aboveground Storage Tank								
	INPUT DATA		Į			CALCULATIONS			
				Units			Symbol		Units
							-,		
		Symbo		Units	Rim Seal Losses (F	Eq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1.073.56	lb-mole/ft*vr
Molecular Weight	1	C J III C C		01110	Zero wind spe	ed LR factor: see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*
Molecular weight	t	Mv	50	l b/lb-mole	Wind speed de	ependent I R factor: see Table 7 1-8	KRb	0.3	NA
Tank design data	•				Average ambie	ent wind speed at tank site: if IFR use Zero	V	0.0	mph
Shell height		Hs	48.00		Seal-related wind speed exponent: see Table 7 1-8		n	1.6	NA
Diameter		D	150.00	ft	Vapor pressure function: see Figure 7.1-19		P*	0.22	NA
Tank volume			5,105,286	gallons	Tank diameter		D	150.00	ft
Turnovers		N	13.62	5	Average vapor	r molecular weight: see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole
Throughput		Q	69.529.832	gal/vr	Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Number of fixed	roof support columns	Nc	0.00	NA		,			
Effective column	diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	Withdrawal losses	(Eq.2-19: LWD=[((0.943)QCsWL)/D]*[1+(NcF	dLW	443.36	lb/yr
Deck seam loss	per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr	Annual through	hput	Q	1,655,472	bbl/yr
Zero wind speed	I LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nft*yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2
Wind speed dep	endent LR factor; see Table 7.1-8	KRb	0.3	NA	Average organ	nic liquid density	WL	7.10	lb/gal
Average ambien	t wind speed at tank site; if IFR use Zero	v	0.0	mph	Tank diameter		D	150.00	ft
Seal-related wind	d speed exponent; see Table 7.1-8	n	1.6	NA	Constant		0.943	0.94	1,000 ft3*gal/bbl2
Vapor pressure f	function; see Figure 7.1-19	P*	0.224	NA	Number of fixe	ed roof support columns	Nc	0.00	NA
Shell clingage fa	ctor; see Table 7.1-10	Cs	0.0060	bbl/1,000 ft2	Effective colun	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Average organic	liquid density	WL	7.10	lb/gal					
Deck seam lengt	th factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losse	s (Eq.2-13: LF = FF P*MvKc)	LF	4,656.58	lb/yr
Average Reid Va	apor Pressure	RVP	12.50		Total deck fitting loss factor; see Eq. 2-14		FF	1,041.00	lb-mole/yr
					Vapor pressure function; see Figure 7.1-19		P*	0.22	NA
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	8.7173		Average vapor	r molecular weight; see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole
					Product factor; 0.4 for crude oils or 1 for other organic liquids		Kc	0.40	NA
Eq from Fig 7.1-	16: 12.82 - 0.9672 ln (RVP)	А	10.377						
Eq from Fig 7.1-	16: 7261 - 1216 ln (RVP)	В	4,189.7		Deck Seam Losses	s (Eq.2-18: LD = KDSDD2P*MvKc)	LD	2,818.10	lb/yr
					Deck seam los	ss per unit seam length factor; 0.0 or 0.14	KD	0.14	lb-mole/ft-yr
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I (Eqn. 1-28)	TLA	510.21	*R	Deck seam ler	ngth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Tank diameter	-	D	150.00	ft
Liquid bulk temp	erature (Equation 1-31)	ТВ	509.1	*R	Vapor pressur	e function; see Figure 7.1-19	P*	0.22	NA
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	r molecular weight; see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Product factor	; 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
	Average Daily Liquid Surface Temperature:		50.5	*F					
				+2	Total Losses (Eq.2	-1 & 2-2: LT = LR+LW+LF+LD)	LT	8,991.60	lb/yr
IAA = ((TAX+TA)	AN)/2)	IAA	508.20	*K					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	nimum ambient temperature, Table 7.1-2	TAN	499.30	řΚ	Ш				
		TD		*5	Π				
Liquid Bulk Tem	perature; Eq 1-31: IB = TAA + 0.003 as I	IB	509.09	٦K	Ш				
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6				-				
Quanity of East		01		0	-				
Quantity of Each	1 Fitting:		<u>KI</u>	Source Table 7.1.10	-				
Access Halch (B	o Hatch (Poltod/Caskotod)	2	1.0	Table 7.1-12	-				
Column Woll (R	uilt Up: Casketed Sliding Cover)	0	2.0	Table 7.1-12	-				
Sample Pine/Mo	all (Slit Fabric Seal 10% Open)	1	33.0	Table 7.1-12	-				
Stub Drain (Slit E	an joint rabilitidear 1070 Open) Fabric Seal 10% Open)	1	12.0	Table 7.1-12	_				
Vacuum Breaker	(Weighted Mech. Actu: Gasketed)	1	6.2	Fg 2-7 & Table 7 1-	12				
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Winer)	0	0.2 8 3	Fg 2-7 & Table 7.1-	12				
		112	70	Table 7 1-12	<u>.</u>				
Ladder		0	56.0	Table 7 1-12	-				
Ladder / Guide-F	Pole Combination	1	60.0	Table 7.1-12	-				
		+ ·	00.0		-				
	Total deck fitting loss factor:	1	1,041.00	Eq. 2-6	-				
				1 A					

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	114		Tank type	Internal Floating Re	oof Date			07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global	Performed by			Nicole Brower	
City	Albany		State	NY		,,			
Description	Aboveground Storage Tank			1				1	
			1			CALCULATIONS		I	
		1		Units			Symbo		Units
		1		•			- j		
		Symbo	1	Unite	Rim Seal Losses (F		I R	858 85	lb-mole/ft*vr
Molecular Weight		Symbo	1	01113	Zero wind sne	ed I R factor: see Table 7 1-8	KRa	1.6	lb-mole/(mph)nft
Molecular weight		Mv	50	l h/lh-mole	Wind speed de	enendent I R factor: see Table 7 1-8	KRh	0.3	NA
Tank design data					Average ambi	ent wind speed at tank site: if IER use Zero	V	0.0	mnh
Shell height		Hs	48.00		Seal-related w	ind speed exponent: see Table 7 1-8	n	1.6	ΝΔ
Diameter		D	120.00	ft	Vapor pressur	e function: see Figure 7 1-19	P*	0.22	NA
Tank volume		5	3 787 905	gallons	Tank diameter	·	D	120.00	ft
Turnovers		N	13.62	gallorio		r molecular weight: see Note 1 to Equation 1-2	1 Mv	50.00	lb/lb-mole
Throughput		0	51 588 177	nal/vr	Product factor	: 0.4 for crude oils or 1 for other organic liquids	Kc	0.40	
Number of fixed	roof support columns	Nc	0.00	NΔ	1 1000001 100001		T C	0.40	
Effective column	diameter: 1 1 0 7 or 1 0	Fc	1 10	ft	Withdrawal lossos	(Eq 2-19: 1 WD=[((0.943)OCeWI)/D]*[1+(NcE	d W	/11 19	lb/vr
Deck seam loss	per unit seem length factor: 0.0 or 0.14	KD LC	0.14	lb_mole/ft_vr	Annual throug	hout		1 228 200	bbl/vr
Zero wind sneed	I R factor: see Table 7 1-8	KRa	16	lb-mole/(mph)nft*\/r	Shell clingage	factor: see Table 7 1-10	Cs.	0.0060	bbl/1 000 ft2
Wind speed dep	andent LR factor: see Table 7 1-8	KRh	0.3	ΝΔ		nic liquid density	WI	7 10	lh/aal
	wind speed at tank site: if IEP use Zero	V	0.3	mph	Tank diamotor			120.00	ff
Seal-related wind	t sneed exponent: see Table 7 1-8	'n	0.0	ΝΔ	Constant		0 0/3	120.00	1 000 ft3*aal/bbl
Vanor pressure f	a speed exponent, see rable 7.1-0	D*	0.224	NΔ	Number of five	ad roof support columns	0.943 No	0.94	
Sholl clingago fa	stor: soo Table 7.1.10	г Сс	0.224	hhl/1 000 #2	Effective colur	nn diamotor: 1 1 0 7 or 1 0	Fo	0.00	fi fi
	liquid depoity	05	0.0060	bbi/1,000 itz	Ellective colui		FC	1.10	n
Average organic	h factor: Longth of Soom / Aroa of Dook	VVL PD	7.10	ib/yai #/#2	Dook Fitting Loopo		1 5	767 70	lb/ur
Average Boid Ve	In actor, Length of Seall / Area of Deck	SU DVD	12.50	IVILZ	Total dock fitting loss factor: and Eq. 2.14			171.64	ID/yi
Average Relu va		RVF	12.50		Vapor process function: and Figure 7.1.10			0.02	ID-ITIOIE/yi
Equation 1.25 D	$(A = \alpha)(\alpha (P/T A))$	DvA	0 7172		Average vener melecular weight acc Nets 1 to Equation 1 21			0.22	INA Ib/lb_molo
Equation 1-25 PV	$A = \exp(A - (B/TLA))$	PVA	0./1/3		Product factor: 0.4 for crude oils or 1 for other organic liquids			50.00	
Ea from Fig 7.1		^	10.077		FIDUUCLIACIO		RC	0.40	INA
Eq Irom Fig 7.1-	10. 12.02 - 0.9072 III (RVP)	A	10.377		Dook Soom Loopoo (Eg. 2.49) LD = KDSDD2D*MyKo)		1.5	4 902 50	lle har
Eq Ironi Fig 7.1-	10. 7201 - 1210 III (RVP)	в	4,169.7		Deck Seam Losses (Eq.2-16: LD = KDSDD2P*MVKC)			1,603.59	ID/yi
	0.0*TD + 0.005**! (F 4.00)		= 40.04	*D	Deck seam loss per unit seam length factor; 0.0 or 0.14		ND OD	0.14	ID-ITIOIE/IL-YI
1LA = 0.4"1AA +	0.6"1B + 0.005"0"1 (Eqn. 1-28)	TLA	510.21	"R *D	Deck seam length factor; Length of Seam / Area of Deck		50	0.20	11/11/2
Average daily an	Iblent temperature (Equation 1-30)		508.2	"R *D	Tank diameter	- functions and Figure 7.4.40	D D*	120.00	
Liquid bulk temp	erature (Equation 1-31)	IB	509.1	^K	Vapor pressur	e function; see Figure 7.1-19	P^	0.22	NA lls //ls
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	r molecular weight; see Note 1 to Equation 1-2		50.00	ID/ID-mole
Daily total solar I	nsolation on a norizontal surface, Btu/(ft2 day)	1	1180.0	*-	Product factor	; 0.4 for crude oils or 1 for other organic liquids	ĸc	0.40	NA
l	Average Daily Liquid Surface Temperature:	<u> </u>	50.5	"F	Tatalian (T. 5	4.8.0.0.17 - 10.110/15.10	. .	0.044.45	lle to an
$TAA = //TAV \cdot TA$	N1/2)	TA 4	E00.00	*D	I OTAI LOSSES (EQ.2	$-1 \propto 2-2: L1 = LK+LW+LF+LD)$		3,841.40	ю/уг
IAA = ((IAX+IA)	N//2)		506.20	л *D			1		
average daily ma	iximum ambient temperature, Table 7.1-2		517.10	к *D					
average daily mil	ninum ambient temperature, Table 7.1-2	IAN	499.30	ĸ	l				
Liquid Dulls T		то	500.00	*D	1				
Liquia Bulk Temp	Derature, Eq. 1-31: $IB = IAA + 0.003 \text{ as } I$	ів	509.09	ĸ	l				
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6								
Quanity of Early	Eitting	04.1		Course -					
	i Filling:		<u>KI</u>	Source					
Automotia Course	Ulicu/GaSKeleu)	2	1.0	Table 7.1-12					
Column Moll (Bu	ilt Lip: Casketed Sliding Covery	0	2.8	Table 7.1-12	-				
Sample Dipo/Ma	III (Slit Eabric Soal 10% Open)	0	33.0	Table 7.1-12	-				
Sample Pipe/We	in (Sint i abric Sear 10% Open)	445	12.0	Table 7.1-12	—				
Stud Drain (Slit F	ADDIC Sear 10% Open)	115	1.2		10				
Vacuum Breaker	(Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-1	; 7.1-12				
Siolled Guide-Po	ie (Gaskeleu Siluing Gover w Sieeve/wiper)	U	8.3	Eq.2-1 & Table (.1-1	12				
Legs		0	7.9	Table 7.1-12					
Ladder / Outstan	tele Combination	0	56.0	Table 7.1-12					
Lauder / Guide-F	OIE COMDINATION	U	0.00						
	Tatal de la fittion la set f	 	474.04	Fa 2.6					
II.	I OTAL DECK TITLING LOSS FACTOR:	1	171.64	Ey. 2-0					

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	115 Dente (Assess D)(D (C 7)		Tank type	Internal Floating R	100	Date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				L	
Description	Aboveground Storage Tank				ir			<u> </u>	
	INPUT DATA	1	1	11-24-		CALCULATIONS	0		11-26-
				Units			Symbol	<u> </u>	Units
		<u> </u>							
		Symbo		Units	Rim Seal Losses (E	iq.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,073.56	lb-mole/ft*yr
Molecular Weight					Zero wind spee	ed LR factor; see Table 7.1-8	KRa	1.6	lb-mole/(mph)nf
Molecular weight	t	Mv	50	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRD	0.3	NA
Tank design data					Average amble	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		HS	48.00	~	Seal-related wi	ind speed exponent; see Table 7.1-8	n	1.6	NA
Diameter		D	150.00	π	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank volume		NI	5,642,527	galions	Tank diameter	malagular weight and Nate 4 to Equation 4.24	D	150.00	Π lh/lh maala
Turnovers		N O	13.62		Average vapor	molecular weight, see Note 1 to Equation 1-21	IVIV	50.00	ID/ID-MOIE
I nrougnput	no of our post only more	Q	76,846,616	gai/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	KC	0.40	NA
Number of fixed	root support columns	INC	0.00	NA G			1.14/	100.01	11. <i>(</i>
Effective column	I diameter; 1.1, 0.7, or 1.0	FC	1.10	TT.	withdrawal losses	(Eq.2-19: LWD=[((0.943)QCSWL)/D]^[1+(NCF0		490.01	ID/yr
Zero wind enood	L D fostor: and Table 7.1.9	KDa	0.14	ID-ITIOIE/II-yr	Annual through	Ipul factor: and Table 7.1.10	Q	1,829,081	DDI/yr
Zero wind speed	andont I D footor: 000 Toble 7.1.0		1.6	ID-mole/(mpn)mt*yr		iacior, see Table 7.1-10	105	0.0060	
Average ambier	t wind speed at tank site: if ICD use Zere	KRD	0.3	mah	Average organ	ic ilquiu delisity		1.10	ib/gai
Average amplen	d sneed exponent: see Table 7.1.9	v n	0.0	Πρη			0.042	150.00	1 000 ft2*aal/bb
Vapor processor	u specu exponent, sec rable 7.1-0	D*	1.0		Number of five	d roof support columns	0.943	0.94	
Shell clippoor fo	unicion, see Figure 7.1-19 actor: see Table 7.1-10		0.224	NA bbl/1.000.#2	Effective och	u roor support columns	Ec.	0.00	11/2A ff
Average organia	liquid density	US M/I	0.0060	001/1,000 It2	Ellective coluit		FC	1.10	11
Average organic	th factor: Length of Seem (Area of Deck	VVL	7.10	ib/gai	Dook Fitting Loopor		1.5	4 445 64	lb/ur
Deck sealli leng	and Resource	SU DVD	12.50	IVILZ	Total dock fittin	s (Eq.2-13: LF - FF P MVRC)		1,115.61	ID/yi
Average Reiu va	apor Fressure	RVF	12.50			function: and Figure 7.1.10		249.40	
Equation 1.25 D	$\lambda(A = \exp(A (P/T A)))$	DvA	0 7172			molecular weight: see Note 1 to Equation 1.21	P	50.00	INA Ib/lb molo
Equalion 1-25 P	VA = exp(A-(B/TLA))	PVA	0./1/3		Average vapor	0.4 for crude cile or 1 for other organic liquide	IVIV Ko	50.00	
Ea from Fig 7.1	16: 12 82 0 0672 lp (D)(D)	٨	10.277		Product factor,	0.4 for crude ons of 1 for other organic liquids	NC	0.40	NA
Eq from Fig 7.1-	16: 7261 - 1216 ln (P\/P)	R	10.377		Dock Soam Lossos			2 818 10	lb/vr
Eq IIOIII Fig 7.1-	10. 7201 - 1210 III (RVF)	Б	4,109.7		Deck Sealin Losses	a por unit soom longth factor: 0.0 or 0.14		2,010.10	lb/yi
T = 0.4 T A A	+ 0.6*TB + 0.005*a*l (Eap. 1-28)	ті д	510.21	*D	Deck seam len	s per unit searn length lactor, 0.0 01 0.14	RD SD	0.14	ft/ft2
	nbient temperature (Equation 1-30)		508.2	*D	Tank diameter	gin actor, Lengin of Sean / Area of Deck	50	150.00	ft
Liquid bulk temp	erature (Equation 1-31)	TB	500.2	*R	Vanor pressure	function: see Figure 7.1-19	P*	0.22	ΝΔ
Tank paint solar	absorptione dimensionless Table 7 1-6	a 10	03	IX		molecular weight: see Note 1 to Equation 1-21	My	50.00	lh/lh-mole
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	ŭ I	1180.0		Product factor:	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	
Dully total Solar I	Average Daily Liquid Surface Temperature:	1	50.5	*F			i i i i i i i i i i i i i i i i i i i	0.40	
	Average Baily Elquid Canado Temperatare.		00.0	•	Total Losses (Eg.2.	1 & 2-2: T = R+ W+ F+ D)	I T	5 497 29	lb/vr
TAA = ((TAX+TA)	AN)/2)	ТАА	508 20	*R	10tal E03363 (Eq.2-	-102-2. ET = E(CEW(ET ED))		0,407.20	10/ 91
average daily ma	aximum ambient temperature Table 7 1-2	TAX	517.10	*R				<u> </u>	
average daily mi	inimum ambient temperature. Table 7.1-2	TAN	499.30	*R					
average daily m		17.11	100.00	IX	Ш				
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 qs I	TB	509.09	*R	1				
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6		000.00		Ш				
i otal dool itting			Loss Factor		-				
Quanity of Each	h Fitting:	Qtv	Kf	Source	-				
Access Hatch (B	Bolted/Gasketed)	2	1.6	Table 7.1-12	-				
Automatic Gauge	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	-				
Column Well (Bi	uilt-Up: Gasketed Sliding Cover)	0	33.0	Table 7.1-12	-				
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	2	12.0	Table 7.1-12	-				
Stub Drain (Slit F	Fabric Seal 10% Open)	180	1.2	Table 7.1-12	-				
Vacuum Breaker	r (Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-	12				
Slotted Guide-Po	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-	12				
Legs		0	7.9	Table 7.1-12	-				
Ladder		0	56.0	Table 7.1-12	-				
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	-				
					-				
	Total deck fitting loss factor:	1	249.40	Eg. 2-6	-				
		1			-				
		1			-				
(1	1	1	-				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	31 On the (Annual DVD 42 T)		Tank type	Internal Floating R	100	Date Destance date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				l	
Description	Aboveground Storage Lank				<u>ir</u>			<u> </u>	
	INPUT DATA	1		11-24-		CALCULATIONS			11
				Units			Symbol		Units
		<u> </u>							
		Symbo		Units	Rim Seal Losses (E	q.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,845.19	lb-mole/ft*yr
Molecular Weight			50	1 h //h	Zero wind spee	ed LR factor; see Table 7.1-8	KRa	3.3	Ib-mole/(mph)nf
Molecular weight	l	IVIV	50	LD/ID-mole	wind speed de	pendent LR factor; see Table 7.1-8	KRD	0.1	NA
Tank design data		l la	45.00		Average amble	ent wind speed at tank site; if IFR use Zero	V	0.0	mpn
Shell height		HS D	45.00	a	Seal-related wi	ha speed exponent; see Table 7.1-8	n D*	3.0	
Diameter		D	125.00	IL gollopo	Vapor pressure	e function; see Figure 7.1-19	P"	125.00	NA #
		N	3,001,025	galions		molecular weight: see Note 1 to Equation 1.21	D My	125.00	IL Ib/lb molo
Turnovers		0	13.02 51 777 756	gallyr	Broduct factor:	0.4 for grude oils or 1 for other organic liquids	Ko	0.40	
Number of fixed	reaf support columns	Q	51,777,750	yai/yi	Product factor,	0.4 for crude ons of 1 for other organic liquids	NC	0.40	NA
Effective column		NC Eo	10.00	nA ff	Withdrawal loccos (421.06	lb/ur
Deck seam loss	ner unit seem length factor: 0.0 or 0.14	FC KD	0.14	lb_mole/ft_vr		[Eq.2-13. EWD-[((0.343)@CSWE)/D] [1+(NCF0		1 232 804	bbl/yr
Zero wind speed	L P factor: see Table 7 1-8	KDa	3.3	lb-mole/(mph)nft*vr	Shell clingage f	factor: see Table 7 1-10	Q (c	0,0060	bbl/yi
Wind speed dep	endent I R factor: see Table 7.1-8	KRh	0.1				WI	7 10	lb/gal
Average ambient	t wind speed at tank site: if IFR use Zero	V	0.1	mph	Tank diameter		D	125.00	ft
Seal-related win	d speed exponent: see Table 7 1-8	'n	3.0	NA	Constant		0.943	0.04	1 000 ft3*aal/bb
Vanor pressure f	function: see Figure 7 1-19	P*	0 224	NA	Number of five	d roof support columns	Nc	10.00	NA
Shell clingage fa	ctor: see Table 7 1-10	L Cs	0.0060	bbl/1 000 ft2	Effective colum	in diameter: 1.1.0.7 or 1.0	Fc	1 10	ft
Average organic	liquid density	WI	7 10	lb/nal	Elicotive oblain			1.10	
Deck seam lengt	th factor: Length of Seam / Area of Deck	SD	0.20	ft/ft2	Deck Fitting Losses	(Fa 2-13: F = FF P*MvKc)	IF	2 296 53	lb/vr
Average Reid Va	apor Pressure	RVP	12.50	10112	Total deck fittin	a loss factor: see Eq. 2-14	FF	513 40	lb-mole/vr
, tronago riola re					Vapor pressure	e function: see Figure 7 1-19	P*	0.22	NA
Equation 1-25 P	vA = exp(A-(B/TLA))	PvA	8,7173		Average vapor	molecular weight: see Note 1 to Equation 1-21	Mv	50.00	lb/lb-mole
Equation 1 201			0.1.1.0		Product factor:	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
Ea from Fia 7.1-	16: 12.82 - 0.9672 ln (RVP)	А	10.377		i roudot idotor;			0.10	
Eq from Fig 7.1-	16: 7261 - 1216 ln (RVP)	В	4,189.7		Deck Seam Losses	(Eq.2-18: LD = KDSDD2P*MvKc)	LD	1,957.02	lb/yr
1 2 3			,		Deck seam los	s per unit seam length factor: 0.0 or 0.14	KD	0.14	lb-mole/ft-vr
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*l (Egn. 1-28)	TLA	510.21	*R	Deck seam len	gth factor; Length of Seam / Area of Deck	SD	0.20	ft/ft2
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Tank diameter	<u> </u>	D	125.00	ft
Liquid bulk temp	erature (Equation 1-31)	TB	509.1	*R	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.3		Average vapor	molecular weight; see Note 1 to Equation 1-21	Μv	50.00	lb/lb-mole
Daily total solar i	nsolation on a horizontal surface, Btu/(ft2 day)	1	1180.0		Product factor;	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NA
	Average Daily Liquid Surface Temperature:		50.5	*F					
					Total Losses (Eq.2-	1 & 2-2: LT = LR+LW+LF+LD)	LT	6,529.79	lb/yr
TAA = ((TAX+TA	N)/2)	TAA	508.20	*R					
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R					
average daily mi	nimum ambient temperature, Table 7.1-2	TAN	499.30	*R					
	·				4				
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	ΤВ	509.09	*R	1				
Total deck fitting	loss factor using Equation 2-14; see Eq. 2-6				_				
			Loss Factor						
Quanity of Each	n Fitting:	Qty	Kf	Source	_				
Access Hatch (B	olted/Gasketed)	2	1.6	Table 7.1-12					
Automatic Gauge	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	_				
Column Well (Bu	uilt-Up; Gasketed Sliding Cover)	10	33.0	Table 7.1-12	_				
Sample Pipe/We	II (Slit Fabric Seal 10% Open)	2	12.0	Table 7.1-12	_				
Stub Drain (Slit F	Fabric Seal 10% Open)	125	1.2	Table 7.1-12	_				
Vacuum Breaker	(Weighted Mech. Actu.; Gasketed)	1	6.2	Eq.2-7 & Table 7.1-	<u>1</u> 2				
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7.1-	<u>1</u> 2				
Legs		0	7.9	Table 7.1-12	_				
Ladder		0	56.0	Table 7.1-12	_				
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	_				
					_				
	Total deck fitting loss factor:		513.40	Eq. 2-6	_				
		L			_				
		L			_				
		1	1	1					

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	32		Tank type	Internal Floating R	100	Date		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				 	
Description	Aboveground Storage Lank		I <u></u>		ir			<u> </u>	
	INPUT DATA	1		11-24-		CALCULATIONS	0		11
				Units			Symbol	<u> </u>	Units
		<u> </u>							
		Symbo		Units	Rim Seal Losses (E	(q.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,845.19	lb-mole/ft*yr
Molecular Weight					Zero wind spee	ed LR factor; see Table 7.1-8	KRa	3.3	lb-mole/(mph)nf
Molecular weight	t	Mv	50	Lb/lb-mole	Wind speed de	ependent LR factor; see Table 7.1-8	KRD	0.1	NA
Tank design data					Average amble	ent wind speed at tank site; if IFR use Zero	V	0.0	mpn
Shell height		HS	45.00	~	Seal-related wi	ind speed exponent; see Table 7.1-8	n	3.0	NA
Diameter		D	125.00	π	Vapor pressure	e function; see Figure 7.1-19	P*	0.22	NA
Tank volume			3,801,825	galions	Tank diameter		D	125.00	Π
Turnovers		N O	13.02		Average vapor	molecular weight; see Note 1 to Equation 1-21	IVIV	50.00	ID/ID-MOIE
I nrougnput	no of our post only more	Q	51,///,/56	gai/yr	Product factor;	0.4 for crude oils or 1 for other organic liquids	ĸc	0.40	NA
Number of fixed	roor support columns	INC	10.00	NA 0		(E = 0.40.) MD - [((0.040) 0.0.) MI) (D)+[4. (N) - E	1.14/	101.00	11- 6
Effective column	I diameter; 1.1, 0.7, or 1.0	FC	1.10	TT.	withdrawal losses	(Eq.2-19: LWD=[((0.943)QCSWL)/D]^[1+(NCF0		431.06	ID/YF
Zero wind enood	L D fostor: and Table 7.1.9	KDa	0.14	ID-ITIOIE/II-yr	Annual through	Ipul factor: and Table 7.1.10	Q	1,232,804	DDI/yr
Zero wind speed	andont I D footor: 000 Toble 7.1.0		3.3	ID-mole/(mpn)mt*yr		iacior, see Table 7.1-10	05	0.0060	
Average ambier	t wind speed at tank site: if ICD use Zere	KRD	0.1	mah	Average organ	ic ilquiu delisity	D	1.10	ib/gai #
Average amplen	d sneed exponent: see Table 7.1.9	v n	0.0	Πρη			0.042	125.00	1 000 ft2*aal/bb
Vapor processor	u specu exponent, see rable 7.1-0	D*	3.0		Number of fire	d roof support columns	0.943	0.94	
Shall alingage for	veter: each Teble 7.1.19	P Co	0.224	NA 55//1 000 #2		u roor support columns		10.00	NA #
		CS	0.0060	DDI/ 1,000 ILZ	Effective colum		FC	1.10	n
Average organic	th factor: Longth of Soom (Area of Dook	VVL	7.10	id/gai	Dook Fitting Loopor	(F~ 2 42: F - FF D*M:/Ka)	1.5	2 206 52	lb/ur
Deck sealli leng	and Resource	SU DVD	12.50	IVILZ	Total dock fittin	s (Eq.2-13: LF - FF P MVRC)		2,296.53	ID/yi
Average Reiu va	apor Fressure	RVF	12.50			function: and Figure 7.1.10		0.00	
Equation 1.25 D	$\lambda(A = \exp(A (P/T A)))$	DvA	0 7172			molecular weight: see Note 1 to Equation 1.21	P My	50.00	INA Ib/lb molo
Equation 1-25 P	VA = exp(A-(B/TLA))	PVA	0./1/3		Average vapor	0.4 for crude cile or 1 for other organic liquide	IVIV Ko	50.00	
Fa from Fig 7.1	16: 13 82 0 0672 lp (D)(D)	٨	10.277		Product factor,	0.4 for crude ons of 1 for other organic liquids	NC	0.40	INA
Eq from Fig 7.1-	16: 7261 - 1216 ln (P\/P)	R	10.377		Dock Soam Lossos			1 957 02	lb/vr
	10. 7201 - 1210 III (RVF)	Б	4,109.7		Deck Sealli Losses	a por unit soom longth factor: 0.0 or 0.14		1,957.02	lb/yi
	+ 0.6*TB + 0.005*a*l (Eap. 1-28)	ті д	510.21	*D	Deck seam len	s per unit searn length lactor, 0.0 01 0.14		0.14	ft/ft2
Average daily an	phiont tomporature (Equation 1.20)		510.21	*D	Tank diamotor	gin actor, Lengin of Seant / Area of Deck	50	125.00	1011Z
Liquid bulk temp	erature (Equation 1-31)	TR	500.2	*D	Vapor pressure	function: see Figure 7.1-10	D D*	0.22	ΝΔ
Tank naint solar	absorptance dimensionless Table 7 1-6	a	0.3	IX		molecular weight: see Note 1 to Equation 1-21	My	50.00	lh/lh-mole
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	u I	1180.0		Product factor:	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	
Daily total Solar I	Average Daily Liquid Surface Temperature:	ľ	50.5	*F			i te	0.40	11/1
	Average Daily Elquid Gunace Temperature.		50.5	•	Total Losses (Eg.2.	1 & 2-2: T = R+ W+ F+ D)	I.T.	6 529 79	lb/vr
TAA = ((TAX+TA))	AN)/2)	ΤΔΔ	508.20	*R	10tai 203363 (24.2-	$1 \times 2^{-2} = 1 = 1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1 \times 1$	<u></u>	0,323.73	10/ y1
average daily ma	avimum ambient temperature. Table 7 1-2	TAX	517.10	*R			<u> </u>	<u> </u>	
average daily ma	inimum ambient temperature. Table 7.1-2	ΤΔΝ	499.30	*R					
average daily mi		1741	400.00		Ш				
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 gs I	TB	509.09	*R	Т				
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6	10	000.00		Ш				
rotar acon nuing			Loss Factor		-				
Quanity of Each	h Fitting:	Otv	Kf	Source	-				
Access Hatch (B	Rolted/Gasketed)	2	16	Table 7 1-12	-				
Automatic Gauge	e Hatch (Bolted/Gasketed)	0	2.8	Table 7.1-12	-				
Column Well (Bi	uilt-Up: Gasketed Sliding Cover)	10	33.0	Table 7.1-12	-				
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	2	12.0	Table 7.1-12	-				
Stub Drain (Slit F	Fabric Seal 10% Open)	125	12.0	Table 7.1-12	-				
Vacuum Breaker	r (Weighted Mech. Actu.: Gasketed)	1	6.2	Eq.2-7 & Table 7 1-	12				
Slotted Guide-Po	ole (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7 1-	12				
Leas		0	7.9	Table 7.1-12	-				
Ladder		0	56.0	Table 7.1-12	-				
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	-				
			0.0		-				
	Total deck fitting loss factor:		513 40	Ea. 2-6	-				
	. etc. wook inting ioos lactor.	1	010.10	<u> </u>	-				
		1	1	1	-				
		1			-				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	39 On the (Annual DVD 40 T)		Tank type	Internal Floating R	100	Date Destance of the		07/09/20	
Material stored	Crude (Average RVP 12.5)		Company	Global		Performed by		Nicole Browe	r
City	Albany		State	NY				 	
Description	Aboveground Storage Tank				u			<u> </u>	
	INPUT DATA	r		11-24-		CALCULATIONS			11-24-
				Units			Symbol	<u> </u>	Units
		<u> </u>							
		Symbo		Units	Rim Seal Losses (E	q.2-3: LR = (KRa + KRb v^n)DP* Mv Kc)	LR	1,845.19	lb-mole/ft*yr
Molecular Weight					Zero wind spee	ed LR factor; see Table 7.1-8	KRa	3.3	lb-mole/(mph)nf
Molecular weight	t	Μv	50	Lb/lb-mole	Wind speed de	pendent LR factor; see Table 7.1-8	KRD	0.1	NA
Tank design data					Average ambie	ent wind speed at tank site; if IFR use Zero	V	0.0	mph
Shell height		Hs	45.00	a	Seal-related wi	nd speed exponent; see Table 7.1-8	n	3.0	NA
Diameter		D	125.00	π	Vapor pressure	e function; see Figure 7.1-19	P^	0.22	NA
		NI	3,073,373	galions	Tank diameter	malagular unight, and Nate 4 to Equation 4.24	D	125.00	Π lh/lh.maala
Turnovers		N O	13.62		Average vapor	molecular weight, see Note 1 to Equation 1-21		50.00	ID/ID-MOIE
Throughput Number of fived	reaf a una art a du mara	Q	41,856,834	gai/yr	Product factor;	0.4 for crude ons or 1 for other organic liquids	KC	0.40	NA
Number of fixed		INC	0.00	NA 0			1.14/		11. <i>t</i>
Effective column	diameter; 1.1, 0.7, or 1.0	FC	1.10	TT.	withdrawal losses ((Eq.2-19: LWD=[((0.943)QCSWL)/D]^[1+(NCF)		320.28	ID/yr
Zero wind encod	per unit seam length factor; 0.0 or 0.14	KDa	0.14	ID-ITIOIE/II-yr	Annual through	Iput	Q	996,591	DDI/yr
Zero wind speed	andent I. D. feeter: and Toble 7.1.0		3.3	ID-mole/(mpn)mt*yr		iaului, see Table 7.1-10	05	0.0060	
Average ambier	t wind speed at tank site: if ICD use Zere	KRD	0.1	mah	Average organ			1.10	ib/gai
Average amplen	t wind speed at talls site, IFIFK USE Zero	v	0.0	Πρη			0.042	125.00	1 000 ft2*aal/bb
Vapor processor	u specu exponent, sec rable 7.1-0	II D*	3.0		Number of fire	d roof support columns	0.943	0.94	
Shell clippoor fo	iunciion, see Figure 7.1-19	Г Се	0.224	NA bbl/1.000.#2	Effective och	u roor support columns	FC	0.00	INA fi
Average ergenie	Liquid density		0.0060	001/1,000 It2	Ellective colum		FC	1.10	ii
Average organic	the factor: Longth of Soom (Area of Dook	VVL	7.10	id/gai	Dook Fitting Loopoo	(Fa 2 42: F - FF D*M://a)	1.5	920.29	lb/ur
Deck sealli leng	and Resource		12.50	IVILZ	Total dock fittin	a loss factor: soo Eq. 2.14		192.30	ID/yi
Average Reiu va	apor Fressure	RVF.	12.50			function, see Eq. 2-14		0.22	ID-ITIOIE/ yi
Equation 1.25 D	$A = \exp(A (P/T A))$	Dv/A	0 7172		Avorago vapor	molecular weight: see Note 1 to Equation 1.21	P My	50.00	INA Ib/lb.molo
Equation 1-25 P	VA = exp(A-(B/TLA))	PVA	0./1/3		Average vapor	110 Equal of the set of the start of the start of the set of the start of the start of the set of the start o	IVIV Ko	50.00	ID/ID-IIIOIe
Ea from Fig 7.1	16: 12 82 0.0672 lp (D)(D)	٨	10.277		Product factor,	0.4 for crude ons of 1 for other organic liquids	NC	0.40	INA
Eq from Fig 7.1-	16: 7261 - 1216 lp (P\/P)	R	10.377		Dock Soam Lossos			1 957 02	lb/vr
	10. 7201 - 1210 III (RVF)	Б	4,109.7		Deck Sealin Losses	a por unit soom longth factor: 0.0 or 0.14		1,957.02	lb molo/ft vr
	- 0.6*TB + 0.005*a*l (Fap. 1-28)		510.21	*D	Deck seam len	ath factor: Length of Seam / Area of Deck		0.14	ft/ft2
Average daily an	nbient temperature (Equation 1-30)		508.2	*D	Tank diameter	gin lactor, Lengin of Sean / Area of Deck	50	125.00	ft
Liquid bulk temp	erature (Equation 1-31)	TR	500.2	*D	Vanor pressure	function: see Figure 7.1-19	D*	0.22	NA
Tank naint solar	absorptance dimensionless Table 7 1-6	а а	03	IX	Average vapor	molecular weight: see Note 1 to Equation 1-21	My	50.00	lh/lh-mole
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	u I	1180.0		Product factor:	0.4 for crude oils or 1 for other organic liquids	Kc	0.40	NΔ
Daily total Solar I	Average Daily Liquid Surface Temperature:		50.5	*F			i te	0.40	
	Average Baily Elquid Canado Temperatare.		00.0	•	Total Losses (Eq.2.	1 & 2-2: T = R+ W+ F+ D)	I T	4 942 86	lb/vr
TAA = ((TAX+TA)	AN)/2)	ТАА	508 20	*R	200303 (24.2-		+ -	4,542.00	·~· J1
average daily ma	aximum ambient temperature Table 7 1-2	TAX	517 10	*R	<u> </u>		<u> </u>	<u> </u>	1
average daily mi	nimum ambient temperature. Table 7.1-2	TAN	499.30	*R	1				
average daily m		17 4 4	100.00	IX	Ш				
Liquid Bulk Tem	perature: Eq 1-31: TB = TAA + 0.003 qs I	TB	509.09	*R	1				
Total deck fitting	loss factor using Equation 2-14: see Eq. 2-6		000.00		Ш				
i otal dool itting			Loss Factor		-				
Quanity of Each	n Fitting:	Otv	Kf	Source	-				
Access Hatch (B	Rolted/Gasketed)	2	16	Table 7 1-12	-				
Automatic Gauge	e Hatch (Bolted/Gasketed)	ō	2.8	Table 7.1-12	-				
Column Well (Bi	uilt-Up: Gasketed Sliding Cover)	0	33.0	Table 7.1-12	-				
Sample Pipe/We	ell (Slit Fabric Seal 10% Open)	2	12.0	Table 7.1-12	-				
Stub Drain (Slit F	Fabric Seal 10% Open)	125	12.0	Table 7.1-12	-				
Vacuum Breaker	r (Weighted Mech. Actu.: Gasketed)	1	6.2	Eq.2-7 & Table 7 1-	12				
Slotted Guide-Po	ble (Gasketed Sliding Cover w Sleeve/Wiper)	0	8.3	Eq.2-7 & Table 7 1-	12				
Leas		0	7.9	Table 7.1-12	-				
Ladder		0	56.0	Table 7.1-12	-				
Ladder / Guide-F	Pole Combination	0	60.0	Table 7.1-12	-				
		Ť	0.0		-				
	Total deck fitting loss factor:		183 40	Ea. 2-6	-				
	. etc. wook inting ioos lactor.		100.10	<u> </u>	-				
			1	1	-				
		1			-				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	Tank 28		Tank type	Fixed Roof Tank		Date	07/09/20		
Material stored	Distillate		Company	Global		Performed by		Nicole Brower	
City	Albany		State	New York					
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
				Units	<u> </u>		Symbol		Units
					o		↓ _]		
Draduat Inform	len	Symbol		Units	Standing Losses (E	=q.1-2: Ls = 365 (Vv * Wv * KE * Ks)	LS	854.11	ID/yr
Product Informat	lion r weight	Max	400	l h/lh mola	vapor Space \	volume, see Equation 1-3	VV M(v	292095.5	110 Ib/#2
vapor Molecular	i weigin	IVIV	130	LD/ID-MOIE	Stock Vapor D	ensity Expansion Factor (0 < KE <= 1): see Equation 1.5	KE MAN	0.0001	ID/IIJ per dav
Tank design data					Vapor Space E	Expansion Factor (U N NE NE 1), See Equation 1-5 Saturation Factor	NE Ke	0.001382	
Shell boight	1	Не	45.00		Constant: Nor	Jaturation Factor	265	0.99	dave/vear
Diameter		ns D	45.00	ft	Constant; Num		303	365	uays/year
Tank volume		D	3 829 140	gallone	Working Losses (E		l w	796 88	lb/vr
Turnovers		N	101 63	galiona	Annual through		0	9 266 013	bbl/vr
Throughput		0	389 172 536	nal/vr	Shell clingage	factor: see Table 7 1-10	Cs	0.0015	bbl/1 000 ft2
Roof Type:	Cone or Dome	~	Cone	ganyi	Average organ	nic liquid density	WL	7.10	lb/gal
If Cone:					Tank diameter	······································	D	125.00	ft
Tank cone roof s	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft	Constant		0.943	0.94	1.000 ft3*gal/bbl2
If Dome					Number of fixe	ed roof support columns	Nc	8.00	NA
Tank dome roof	radius (If unknown, use tank diameter (D) or (2Rs))	RR	125.00	ft	Effective colun	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Number of fixed	roof support columns	Nc	8.00	NA					
Tank Color (see	Paint Tab)		Blue		Vapor Space Volun	ne (Eq.1-3: Vv = ((Pi / 4) D^2)Hvo	٧v	292,095.51	ft3
Breather Vent S	etting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi	Tank diameter		D	125.00	ft
		PBV	-0.03	psi	Vapor Space C	Dutage; see Equation 1-16	Hvo	23.80	ft
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2					
Average organic	c liquid density	WL	7.10	lb/gal	Vapor Space Outag	ge (Eq. 1-16: Hvo=Hs-HL+HRO	Hvo	23.80	ft
					Tank shell heig	ght	Hs	45.00	ft
Average Daily Lic	quid Surface Temperature				Liquid Height ((typically assumed to be at half-full level)	HL	22.50	ft
Uninsulated FR	RT; see Equation 1-27 simplified to Equation 1-28				Roof Outage (1	for a Cone Roof vs Dome Roof)	HRO	1.30	ft
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I	TLA	515.42	*R				-	<i>*</i>
Average daily ar	mbient temperature (Equation 1-30)	TAA	508.2	*R	Roof Outage - Con	e Roof (Eq. 1-17 & 1-18: HRO=(1/3)SR*Rs)	HRO	1.30	ft
Liquid bulk temp	perature (Equation 1-31)	тв	511.4	*R	Tank cone roo	f slope (If unknown, use 0.0625)	SR	0.0625	ft/ft
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9		Tank shell radius		Rs	62.50	ft
Daily total solar	insolation on a norizontal surface, Btu/(ft2 day)	1	1180.0	*5					
	Average Daily Liquid Surface Temperature:		55.7	^F	toof Outage - Dome Roof (Eq. 1-19 & 1-20: HRO=(RR-(RR^2-Rs^2)^0.5)*(0.5+0.16667((RR-(RR^2-Rs^2)^0.5)/		/ HRO	8.57	π
Deutielle Incerte					Tank dome roof radius (If unknown, use tank diameter (D) or (2Rs))		RK D-	125.00	Π
		T1 A	E4E 74	*D	Tank shell radi	l ank shell radius		62.50	π
TLA = 0.3 TAA	+ 0.7 TB + 0.005 uR T	TLA	515.74	к *D	Vented Vanor Saturation Factor /Eq. 1-21: Ke = 1//1+0.052*DvA*Uvo)		Ka	0.00	
Liquid bulk town	perature (Equation 1-30)	TB	511 4	*D	Vented Vapor Saturation Factor (Eq. 1-21: Ks = 1/(1+0.053*PvA*Hvo))		Dv/	0.99	nsia
Tank roof surface	se solar absorptance, dimensionless, Table 7.1-6	αR	0 00	IX.	Vapor Space (e al Avy Daily Lig Outlabe Tellip Dutage: see Equation 1-16	HVC	0.0050	poid ff
Daily total solar	insolation on a horizontal surface Rtu/(ff2 day)	l I	1 180 00			Junago, 555 Equation 1-10	1100	23.00	
Dairy total solar	Average Daily Liquid Surface Temperature:	ľ –	56.0	*F	Vapor Space Expan	Vanor Space Expansion Factor /Eg. 1.5: (ATV/TI A)±//ADV ADD)//DA DvA)1		<u>an n</u>	per dav
	Average Daily Liquid Surface Temperature.		50.0	-	Average Daily	Vapor Temperature Range	ΔΤν	33.70	*R
					Average Daily	Vapor Pressure Bange	ΔPv	0.00	nsi
A TAA = ((TAX+TA))	AN)/2)	TAA	508.20	*R	Breather Vent	Pressure Setting Range	ΔPB	0.06	psi
average daily ma	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R	Vapor Pressur	e at Avg Daily Lig Surface Temp	PvA	0.0056	psia
average daily mi	inimum ambient temperature, Table 7.1-2	TAN	499.30	*R	Average Daily	Liquid Surface Temperature	TLA	515.42	*R
	· · · · · · · · · · · · · · · · · · ·				Atmospheric P	ressure	PA	14.59	psia
					1				
S Wv = (Mv*PVA)/	/(R*Tv)	Wv	0.0001		Equation 1-6, simp	Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks ($\Delta TV = 0.7 \Delta TA + 0.02 \alpha$ l)		33.70	
Vapor Molecular	r weight	Μv	130		Average daily	ambient temperature range	ΔTA	17.8	*R
Constant		R	10.7310		Average tank s	surface solar absorptance, dimensionless, Table 7.1-6	α	0.90	
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	0.0056		daily total sola	r insolation on a horizontal surface, Btu/(ft2 day)	I	1180.00	
Average Daily Li	iquid Surrace Temperature	Τv	518.7138						
					Partially Insulated	d - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I)	ΔTv	326.16	*R
					Average daily	ambient temperature range	ΔTA	508.20	*R
A Uninsulated FR	RT; see Equation 1-32 simplified to Equation 1-33				Tank roof surfa	ace solar absorptance, dimensionless, Table 7.1-6	αR	0.90	
Tv = 0.7*TAA +	0.3*TB + 0.009*a*I	Tv	518.71	*R	Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7		1	1180.00	
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R					
Liquid bulk temp	perature (Equation 1-31)	TB	511.4	*R	Fully Insulated		ΔTv	0.00	*R
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9						
Daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)		ΔΡν	0.00164	psia
					Vapor pressure at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; P		QPVX	0.00586	psia
Partially Insulat	ted FRI; see Equation 1-34	Tu		*D	Vapor pressure at the average daily min liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PvN = exp Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ATV from Figure 7.1.1			0.00422	psia
IV = 0.6*IAA +	U.4" (B + U.U1"αR")	IV	520.09	-K	Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1			516.63	⁻ К
Average daily an	mpient temperature (Equation 1-30)	TAA	508.2	-к +р	Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25ΔTV from Figure 7.1-17		ILN	507.00	ĸ
Liquid bulk temp	perature (Equation 1-31)	IB	511.4	⁻ κ	Fully Insulated		۸Dv	0.00	ncia
Deiby total and	incolotion on a horizontal autors. Table 7.1-6	aĸ	0.90				ΔPV	0.00	psia
Daily total solar	insolation on a nonzontal surface, Btu/(tt2 day)	1	1,180.00		(Faulation 1-10: APB = PBP - PBV)		٨PB	0.06	
Fully Inculated					(Equation 1-10: ΔPB = PBP - PBV)			0.06	nci
		Tv	511 20	*D	Breather Vent Setting Range (Default Assumption: +/- 0.03)		PDP DBV	0.03	poi pei
IV- ID		IV.	511.39	IX.			FDV	-0.03	poi
Liquid Bulk Tom	nerature: Eq. 1-31: TB = TAA + 0.003 re l	TB	511 20	*R	Total Losses (Eg. 4	.1: T = s+ w)	IT.	1 650 09	lb/vr
Average daily an	mbient temperature (Equation 1-30)	ТАА	508.20		1 Juli 203363 (EQ. 1	-1. EI - EV. EW/	<u> -</u>	1,000.90	107 y 1
tank shell solar	absorptance dimensionless Table 7 1-6	as	n an		A	12.101	1		
daily total solar i	insolation on a horizontal surface Rtu//ft2 dav)	1	1 180 00		в	8907			
duny total bold I	Average Daily Liquid Surface Temperature:	r -	51 69	*F	1				
IL		1	01.03						

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

International Description Description Performant by Description Performant by Description Performant by Description Description Description <thdescription< th=""> Description</thdescription<>	ank No.	Tank 29		Tank type	Fixed Roof Tank		Date		07/09/20		
Bindy Description Dission SMPU DAT Concent for Concent for Support (Second Second	laterial stored	Distillate		Company	Global		Performed by		Nicole Brower		
Obschefen Non-Loth L <thl< th=""> L L</thl<>	ity	Albany		State	New York						
Instruction Data CXCULATIONS Symbol Product Information 3 Junits Stending Lasses (Eq. 12. Lar. 388 (IV = We (Fig) = 10. Construction (IV	escription	Aboveground Storage Tank									
Image: construction Specified Units Finded (throading) Specified (throading)		INPUT DATA					CALCULATIONS				
Forder Hormany Fundamental of the second secon					Units			Symbol		Units	
Product Information Product Junity Bandbay Lesses (Ed. 2. Lis 128 (MVY) VEY Fig.) Lis Type (Information engl) H 100 Exposition (Lister) With Expos											
Product Information Image: Discussion 1.0 Year Vacuum set Capacity 1.0 Year Construction result Image: Discussion 1.0 Image: Discu			Symbo	<u>ol</u>	Units	Standing Losses (I	Eq.1-2: Ls = 365 (Vv * Wv * KE * Ks)	Ls	854.11	lb/yr	
Matrix Matcular weight Div 130 Lib Prob Stock Young Drawy New Equation 1.6	roduct Informatic	ion				Vapor Space V	/olume; see Equation 1-3	Vv	292095.5	ft3	
Text design data Processing data Processin	Vapor Molecular v	weight	Μv	130	Lb/lb-mole	Stock Vapor D	ensity	Wv	0.0001	lb/ft3	
Tank design date H 450 Vertex Varies Status Vertex Varies Status No. Text observation 0 1.556 /tll Consummed Const Feedball as Year Status Status <t< td=""><td></td><td></td><td></td><td></td><td></td><td>Vapor Space</td><td>Expansion Factor (0 < KE <= 1); see Equation 1-5</td><td>KE</td><td>0.061382</td><td>per day</td></t<>						Vapor Space	Expansion Factor (0 < KE <= 1); see Equation 1-5	KE	0.061382	per day	
Depint frag (b) (c) (c)< (c)< <	ank design data					Vented Vapor	Saturation Factor	Ks	0.99	NA	
Tankom U 335 32 Description Week (grave fig. 1-55: UVP) (FNR-FCD)) Lew Transform 0 335.72.05 grave Annual Force (grave Fig. 1-50: UVP) 0 Transform 0 335.72.05 grave State diagrage faster see Tables 7-10 0 0 Transform 0 335.72.05 grave State diagrage faster see Tables 7-10 0 0 Transform 0 0 Annual Force faster faste faster faster faster faste faster faster faster fast	Shell height		Hs	45.00	0	Constant; Nun	ber of Daily Events in a Year	365	365	days/year	
International Internat	Diameter		D	125.00	π			<u> </u>			
Throngs Do Model Part of pro Construct	Tank volume		NI	3,829,140	galions	Working Losses (E	(d.1-35: LWD=[((0.943)QCSWL)/D]^[1+(NCFC/D)])		796.88	ID/yr	
Interplate U Jank (ALSA) By Part Ended (Sight) Back, Park (All and	Turnovers		N	101.63		Annual throug		Q	9,266,013	bbi/yr	
Dr. Vice Dots Particle angular big of the service of t	Inrougnput	0	Q	389,172,536	gal/yr	Shell clingage	factor; see Lable 7.1-10	CS	0.0015	bbi/1,000 ft2	
Team control stope of information use 0.0000 SR 0.0000 Constant 0.0000 Tards dominant of adding of information use and damater (D) or (26b) RR 13.66 (t) Filter of form of adgoint of units (D) or (26b) Filter of form of adgoint of units (D) or (26b) Filter of form of adgoint of units (D) or (26b) Filter of form of adgoint of units (D) or (26b) Filter of form of adgoint of units (D) or (26b) Filter of units (D) or (27b) Filter of	Roof Type:	Cone or Dome	-	Cone	9	Average organ	iic iiquid density	VVL	7.10	ib/gai	
Int Our Ore 2000 Bit If unknown, UBD UNCE) SN 0.0450 Bit Unknown UNKnown Tak down control staget (funknown, UBD UNCE) RR 11250 Bit Endemander UNKnown Endemander Ende	If Cone:		0.0		0.0	Tank diameter		D	125.00	Π.	
Transfer Total of (II) Total of (II) Total of (III) Total of (IIII) Total of (IIIII) Total of (IIIII) Total of (IIIII) Total of (IIIII) Total of (IIIIII) Total of (IIIIIII) Total of (IIIIIIIIIIIIIII) Total of (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Tank cone root si	slope (If unknown, use 0.0625)	SR	0.0625	π/π	Constant	d f	0.943	0.94	1,000 π3^gal/bbl2	
Table Control for all of Large (Large Large	If Dome				0	Number of fixe	a root support columns		8.00	NA	
The Cost (see Fast Tab) O Date The Cost (see Fast Tab) V The Cost (see Fast Tab) PPV 0.0.3 PA Tan damafer D Ender Vers PIL (see Fast Tab) PPV 0.0.3 PA Tan damafer D Ender Vers PIL (see Fast Tab) Cost Tab Cost Tab PPV 0.0.3 PA Ender Vers PIL (see Fast Tab) Cost Tab Cost Tab PPV 0.0.3 PA Average Daty Liquid Surface Temperature I Liquid Heipt (topperature table) Hit Hit PA Unrescalated FRT see Equation 1.23 Tab S61.04.02 Recot Class of table 1.00.00.00.00.00.00.00.00.00.00.00.00.00	Tank dome root ra	radius (if unknown, use tank diameter (D) or (2RS))	RR	125.00	π	Effective colur	nn diameter; 1.1, 0.7, or 1.0	FC	1.10	π	
Link code (note rank 160) PBP 0.03 Id Vite Fasc diamonic Vite Fasc	Number of fixed f	Prior support columns	INC	8.00	NA	Vener Onese Velu			000 005 54	40	
International residence resolutions Constraint	Breather Vont Co	railit i au) etting Pange (Default Assumption: ±/ 0.02)	DPD	Blue	nei	Tank diameter	ile (Eq. 1-3. VV = ((P1 / 4) D"2)NV0		292,095.51	nu ff	
Shall aligoge factor see Table 7.1-10 (TeV) (South Just) (FeV)	breather vent Se	euing Range (Delauit Assumption: +/- 0.03)	PBP	0.03	psi		Putago: con Equation 1.16		125.00	n. #	
Construct of the construct of the construct of the construction	Shell clingage for	otor: see Table 7.1-10	Ce Ce	-0.03	psi bbl/1.000.#2	vapor Space (Julaye, see Equalion 1-10		23.80	n.	
Processor Processor <t< td=""><td>Average arget in</td><td></td><td>05</td><td>0.0015</td><td>ubl/ 1,000 Tt2</td><td>Vanor Space Outer</td><td></td><td></td><td>22.00</td><td>#</td></t<>	Average arget in		05	0.0015	ubl/ 1,000 Tt2	Vanor Space Outer			22.00	#	
Inverse Inverse <t< td=""><td>Average organic i</td><td>nquiu uerisity</td><td>VVL</td><td>7.10</td><td>io/gai</td><td>Tork shall be</td><td>ישל (בע. ו-וס. 1700–חג-חביחגט אלי</td><td></td><td>23.80</td><td>n. #</td></t<>	Average organic i	nquiu uerisity	VVL	7.10	io/gai	Tork shall be	ישל (בע. ו-וס. 1700–חג-חביחגט אלי		23.80	n. #	
Printer construction Characterization Characterizat	worago Delle Li-	uid Surface Temperature	+			Liquid Unicht	JIIL twicely accurate to be at helf full levely	HS	45.00	1L #	
Units and the first a	Verage Daily Liqu	ulo Surrace Temperature	-			Liquid Height (typically assumed to be at half-full level)	HL	22.50	Π.	
Increase day and a figure in 130) IAA OP 140.00 Prod Outage - Cone Roof Eq. 147.4 149: HROe((13)BR*Rs) HRO Unput but service figure in 131) IB 0.9 Tank cone red sope (if unknown, use 0.0525) SR Tank cone red sope (if unknown, use 0.0525) IB 0.9 Tank cone red sope (if unknown, use 0.0525) SR Daily total sofar non-broncal surface. Buttrift2 day) I 1150.0 Tank cone red sope (if unknown, use 0.0525) SR Partially insulated PRT: see Equation 1-29 I Tank cone red days (if unknown, use 0.0527) SR Tank cone red days (if unknown, use 0.0527) RR Tank cone red days (if unknown, use 0.0527) SR Partially insulated PRT: see Equation 1-29 IA 515.74 P Tank cone red days (if unknown, use 0.0527) SR Live QD TALA - 0.7110: 0.0000 IA 515.74 P Tank cone red days (if unknown, use 0.0527) SR Live QD TALA - 0.7110: 0.0000 IA 515.74 P Tank cone red days (if unknown, use 0.0527) SR Live QD TALA - 0.7110: 0.0001 IA 50.71 R Vapor Space Expansion 1-20.000 SR Live Q		1; see Equation 1-27 simplified to Equation 1-28	TI A	545.40	*D	Roor Outage (for a Cone Roof vs Dome Roof)	HRU	1.30	π	
Average daily and/ent implandor (Eduction 1-30) IDA 204 (1+7) Profil outget - Constrolling - Constroling - Constrolling - Constrolling - Constrolling - Const	1LA = 0.4" IAA +	+ 0.6" IB + 0.005"d"I	TLA	515.42	*R	De of Outering Orig			4.00	ta -	
LDB1 db1 mperfulie (cquardin 1-3) Ib S114 P.R Tark control tool soper (unknown), use 0.0x.02) SP LDB1 void soor phone, dimensionless, Table 7.1.6 0 0 Tark kent solution, use 10x diameter (Unknown), use 0.0x.02) SP LDB1 void soor modulation to Two tools buy (upd Surface Temperature: 55.7 F Red Outpace-Dome Root (Eq. 119.8.1-29.100, Or (218)) SP Perturbly insulated FRT; see Equation 1-29 1 1 SP Tark kent radius SP Perturbly insulated FRT; see Equation 1-30 TAA SFA Tark kent radius SP Average Gally ambent temperature (Equation 1-30) TAA SFA RE Tark kent radius SP Load Data Kent Sold Start 7A TR Vaca Start 7A SP Vaca Start 7A SP SP Load Data Kent Sold Start 7A TR Vaca Start 7A SP Vaca Start 7A SP SP Load Data Kent Sold Start 7A TR SP Vaca Start 7A SP SP SP SP Load Data Kent Sold Start 7A TR SP SP SP SP SP <td>Average daily am</td> <td>nbient temperature (Equation 1-30)</td> <td>TAA</td> <td>508.2</td> <td>^R</td> <td>Roof Outage - Con</td> <td>e Root (Eq. 1-17 & 1-18: HRU=(1/3)SR*Rs)</td> <td>HRO</td> <td>1.30</td> <td>Π.</td>	Average daily am	nbient temperature (Equation 1-30)	TAA	508.2	^R	Roof Outage - Con	e Root (Eq. 1-17 & 1-18: HRU=(1/3)SR*Rs)	HRO	1.30	Π.	
Tark robust Tark robust <thtark robust<="" th=""> <thtark robust<="" th=""></thtark></thtark>	Liquid buik tempe	erature (Equation 1-31)	IB	511.4	"R	Tank cone roo	r slope (ir unknown, use 0.0625)	SK Dr	0.0625	TI/TL	
Leasy calar mediation on a finitized, starting, start	Tank paint solar a	absorptance, dimensionless, Lable 7.1-6	α	0.9		Tank shell rad	US	Rs	62.50	π	
Average Daily Liquid Surface Temperature 55.1 F For Ordinge Long Roof Light, F176 at 2, R22 / L23 / L25 /	Dally total solar in	Insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0	+⊏				0.57	ta -	
Partially insulated FRT: see Equation 1-29 Image of the image of the		Average Dally Liquid Surface Temperature:		55.7	-F	Roof Outage - Dome	ROOT (Eq. 1-19 & 1-20: HRO=(RR-(RR^2-RS^2)^0.5)^(0.5+0.1666/((RR-(RR^2-RS^2)^0.5)	//HRU	8.5/	π	
Partially insulated PK1; see Equation 1-29 TA First and the properties of the proproprime of the properties of the properties of the p	Dentielle le eviete		-			Tank dome ro	of radius (If unknown, use tank diameter (D) or (2Rs))	RR	125.00	Π	
LLA 0.37 LAX + 0.7° LB + 0.005 °RC1 LLA 515.4° FR Vented Vapor Saturation Factor (Eq. 1-21: Ks = 1/(1+0.053*PA*Hvo)) Ks Layering daily maintering regration (Equation 1-30) TA 506.2° FR Vented Vapor Saturation Factor (Eq. 1-21: Ks = 1/(1+0.053*PA*Hvo)) Ks Layering daily daily daily class color and sources. Bit 14 'R Vapor Pressure at Avg Daily Lig during: see Equation 1-16 Hvo Daily total solar insolation on a horizontal surface. Bit 1/(4) 'R Vapor Pressure at Avg Daily Lig during: see Equation 1-16 Hvo Average Daily Vapor Temsure Fange A/ Solar Average Daily Vapor Temsure Range A/V ArA = ((TAX+TAN)V2) TAA 508.2.0° 'R Breather Vent Pressure Sating Range A/P average daily minimum ambient temperature, Table 7.1-2 TAX 509.2.0° 'R Average Daily Liguid Surface Temp P/A average daily minimum ambient temperature, Table 7.1-2 TAX 499.30° 'R Average Daily Liguid Surface Temp P/A average daily minimum ambient temperature, Table 7.1-2 TAX 499.50° 'R Average Daily Liguid Surface Temp P/A	Partially Insulate	ted FRT; see Equation 1-29	T1 A		* D	Tank shell rad	Uš	RS	62.50	π	
Average daily another temperature (equation 1-30) (PA Sole 2 R Vence vapor saturation Pactor (Eq. 1-2): Ka* (1/VU35-YA*HYO)) NS Liquid bulk temperature (equation 1-30) TB S114 'R Vapor Pressure at Avg Daily Log values Temperature PA Tamk roof surface solar absorptione, dimensionless, Table 7.1-6 R 0.30 Vapor Space Equation 1-16 Pro Daily total solar insolation on a horizontal surface, Blu/I2 day) I 1.180.00 Vapor Space Equation 1-16 Pro Average Daily Vapor Temperature Range AV Vapor Space Expansion Factor (Eq. 1-5: (ATV/TLA)+I(APV-APB)(PA-PA)] KE A TAA = ((TAX+TAN)2) TAA 508.0 'P Average Daily Vapor Temperature Range DV A TAA = ((TAX+TAN)2) TAA 508.20 'R Breather Vent Pressure Setting Range DV average daily maximum ambient temperature, Table 7.1-2 TAX 517.10 'R Vapor Pressure at Avg Daily Log Surface Temp PA average daily maximum ambient temperature, Table 7.1-2 TAX 517.10 'R Average taily unbient temperature range DV Wave (M-'P/AU)(R*TV) Wv 0.00001 Equa	1LA = 0.3^1AA +	+ 0.7^1B + 0.005^dR^1	TLA	515./4	^R	Manda d Manage 0 at		1/-	0.00		
Liquo duk temperature (Equation 1-31) IB 511.4 IK Vapor Space fait and Uativ Liq Suntace Temp PVA Tark root surfaces solar absorptance, dimensionless, Table 7.1-6 GR 0.30 Vapor Space Expansion Factor (Eq. 1-5: (ΔTVTLA)+((ΔPv-ΔPB)/(PA-PvA)) KE Average Daily Uquid Surface Start absorptance, dimensionless, Table 7.1-6 GR 0.30 Vapor Space Expansion Factor (Eq. 1-5: (ΔTVTLA)+((ΔPv-ΔPB)/(PA-PvA)) KE A root and the start an	Average daily am	ncient temperature (Equation 1-30)	TAA	508.2	*R	vented vapor Satu	ration Factor (Eq. 1-21: KS = 1/(1+0.053"PVA"HVO))	KS DuA	0.99		
Tank roof surface sourt absorptance, dimensionless, Table 7.1-6 drk 0.90 Vapor Space Expansion Factor (Eq. 1-5: (ΔTv/TLA)+([ΔPv_ΔPB)/(PA-PvA)] Http://dx/tt	Liquid bulk tempe	erature (Equation 1-31)	IR IR	511.4	^R	Vapor Pressur	e at Avg Daily Liq Surface Temp	PVA	0.0056	psia	
Daily (bial solar insolation of a horizontal surface, Buil(12 day) I I, 1,00.00 Average Daily Liquid Surface Temperature: 80 F Average Daily Vapor Temperature Range ΔTv A TAA = ((TAX+TAN)/2) TAA 508.20 R Breather Vent Pressure Setting Range ΔPv average daily maximum ambient temperature, Table 7.1-2 TAX 517.10 R Vapor Space Expansion Factor (Eq. 1-5: (ΔTv/TLA)+(ΔPv-ΔPB)/(PA-PvA)] KE average daily minimum ambient temperature, Table 7.1-2 TAX 517.10 R Vapor Space Expansion Factor (Eq. 1-5: (ΔTv/TLA)+(ΔPv-ΔPB)/(PA-PvA)] KE average daily minimum ambient temperature, Table 7.1-2 TAX 517.10 R Vapor Space Expansion Factor (Eq. 1-5: (ΔTv/TLA)+(ΔPv-ΔPB)/(PA-PvA)) KE Ware (Mr/PVA)/(R ⁺ Tv) Wv 0.0001 Equation 1-6: simplified to Equation 1-7 for Uninsulated Tanks (ΔTV = 0.7 ΔTA + 0.02 α I) ΔTA Constant Mv 130 Average daily ambient temperature range ΔTA Constant R 10.7310 Average daily ambient temperature factore, Blu/(F12 day) I Average Daily Liquid Surface Care adsorptance, dimensionless, Table 7.1-6 α α	Tank roof surface	e solar absorptance, dimensionless, Table 7.1-6	aĸ	0.90		vapor Space o	Jutage, see Equation 1-16	HVO	23.80	π	
Average Daily Liquie Sundace temperature: 56.0 F Vapor Space Expansion Factor (Eq. 1-5: (Δ1V/LAP/B)/(ΔPVAPB)	Daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	1	1,180.00		. <u> </u>					
Aretage Cally Vapor Pressure Range Δ PV Δ TAA = ((TAX+TAN)/2) TAA 506.20 R Breather Vent Pressure Range Δ PV average daily maximum ambient temperature, Table 7.1-2 TAA 506.20 R Breather Vent Pressure Range Δ PV average daily maximum ambient temperature, Table 7.1-2 TAA 499.30 R Average Daily Liquid Surface Temp PVA average daily maximum ambient temperature, Table 7.1-2 TAN 499.30 R Average Daily Liquid Surface Temperature TLA SW = (MvPVA)/(R ⁺ Tv) Wv 0.0001 Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks (ΔTV = 0.7 ΔTA + 0.02 α I) ΔTV Vapor Molecular weight Mv 130 Average daily ambient temperature range ΔTA Constant R 10.7310 Average daily ambient temperature range ΔTA Average Daily Liquid Surrace Temperature Tv 518.713 R Average daily ambient temperature range ΔTA Average Daily Liquid Surrace Temperature (Equation 1-32 simplified to Equation 1-33 Tv 518.713 R Average daily ambient temperature range ΔTA <td< td=""><td></td><td>Average Daily Liquid Surface Temperature:</td><td>-</td><td>56.0</td><td>^F</td><td>Vapor Space Expa</td><td>hsion Factor (Eq. 1-5: (ΔΙV/ILA)+[(ΔΡV-ΔΡΒ)/(PA-PVA)]</td><td>KE ATV</td><td>0.06</td><td>per day</td></td<>		Average Daily Liquid Surface Temperature:	-	56.0	^F	Vapor Space Expa	hsion Factor (Eq. 1-5: (ΔΙV/ILA)+[(ΔΡV-ΔΡΒ)/(PA-PVA)]	KE ATV	0.06	per day	
A TAA = ((TAX+TAN)/2) TAA 508.20 'R Description (August 2) Constant Constant Constant Provide (Constant)			-			Average Daily	Vapor Temperature Range		33.70	"R	
IAR 1(IA+1AN)2) IAA Suc.or R Eletative Vent Pressure Setting Range IAP 5 average daily maximum ambient temperature, Table 7.1-2 TAX 517.10 'R Vapor Pressure at Avg Daily Liquid Surface Temp PvA average daily maximum ambient temperature, Table 7.1-2 TAX 499.30 'R Average Daily Liquid Surface Temp PvA SW v = (Mv*PVA)/(R*Tv) Wv 0.0001 Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks (ATV = 0.7 ATA + 0.02 ol) ATV Vapor Molecular weight Mv 130 Average daily ambient temperature range ATA Constant R 10.7310 Average daily ambient solar absorptance, dimensionless, Table 7.1-6 d Average daily and Surface Solar absorptance, dimensionless, Table 7.1-6 d d d Average daily and Surface Solar absorptance, dimensionless, Table 7.1-6 d d d Average daily and Surface Solar absorptance, dimensionless, Table 7.1-6 d d d Average daily ambient temperature range ATA Average daily anbient temperature range ATA Average daily anbient temperature (Equation 1-33) TV			T & A	500.00	*D	Average Daily	Vapor Pressure Range		0.00	psi	
average daily maximum ambent temperature, Table 7.1-2 TAX 517.10 TK Vapor Pressure at Avg Daily Liqu Surface Temperature TVA average daily maximum ambent temperature, Table 7.1-2 TAN 499.30 TR Average Daily Liqui Surface Temperature TLA SW-e (Mv*PVA)/(R*Tv) W 0.001 Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks (ΔTV = 0.7 ΔTA + 0.02 α I) ΔTV Vapor Molecular weight Mv 130 Average Daily ambient temperature rage ΔTA Constant R 10.7310 Average daily ambient temperature, dimensionless, Table 7.1-6 α Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0056 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average daily ambient temperature rage TA Average daily ambient temperature rage ΔTA Average daily bisulted - Equation 1-32 simplified to Equation 1-33 Fartially insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 α RI) ΔTV Average daily ambient temperature (Equation 1-30) TA 588.71 R Average daily ambient temperature (Equation 1-31) ΔTV Tank paint solar absorptance, dimensionless, Table 7.1-6 α 0.9 ΔT <td>IAA = ((IAX + IAI)</td> <td>AN)/2)</td> <td>TAA</td> <td>508.20</td> <td>"R</td> <td>Breather vent</td> <td>Pressure Setting Range</td> <td></td> <td>0.06</td> <td>psi</td>	IAA = ((IAX + IAI)	AN)/2)	TAA	508.20	"R	Breather vent	Pressure Setting Range		0.06	psi	
average daily minimum ambient temperature, 1able 7.1-2 TAN 499.30 TK Average Daily Liquid Surface 1 emperature TLA SW = (Mv*PVA)/(R*Tv) N Autorospheric Pressure A Autorospheric Pressure A Vapor Molecular weight Mv 130 Average daily ambient temperature range ΔTA Constant R 10.7310 Average tank surface solar absorptance, dimensionless, Table 7.1-6 a Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0056 daily total solar insolation on a horizontal surface, Btu/(R2 day) I Average Daily Liquid Surrace Temperature Tv 518.7138 Partially Insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 α R) ΔTv A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tak roof surface solar absorptance, dimensionless, Table 7.1-6 dR Tv = 0.7*TAA + 0.3*TB + 0.009*o*1 Tv 518.711 R Average daily ambient temperature (Equation 1-30) TAA 508.2 R Liquid bulk temperature (Equation 1-31) TB 511.4* Fully Insulated Tak roof surface oil absorptance, dimensionless, Table 7.1-6 dR Liquid bulk temperature (Equation 1-30) TAA <td>average daily max</td> <td>aximum ambient temperature, Table 7.1-2</td> <td>TAX</td> <td>517.10</td> <td>*R</td> <td>Vapor Pressur</td> <td>e at Avg Daily Liq Surface Temp</td> <td>PVA</td> <td>0.0056</td> <td>psia</td>	average daily max	aximum ambient temperature, Table 7.1-2	TAX	517.10	*R	Vapor Pressur	e at Avg Daily Liq Surface Temp	PVA	0.0056	psia	
Autridspiration Autridspiration Priority SW = (Mv*PVA)/(R*Tv) Wv 0.0001 Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks (ΔTV = 0.7 ΔTA + 0.02 α I) ΔTv Vapor Molecular weight Mv 130 Average daily ambient temperature range ΔTA Constant R 10.7310 Average tank surface solar absorptance, dimensionless, Table 7.1-6 α Equation 1-25 PVA e xp(A-(B/TLA)) PVA 0.0056 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average Daily Liquid Surrace Temperature Tv 518.718 Partially Insulated - Equation 1-3 (ΔTV = 0.6 ΔTA + 0.02 α R I) ΔTv Average daily ambient temperature range ΔTA Average daily ambient temperature range ΔTA Tv = 0.7*TAA + 0.3*TB + 0.009*σ1 Tv 518.711 'R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Average daily ambient temperature (Equation 1-33) Tv 518.711 'R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Liquid bulk temperature (Equation 1-3.3) TV 518.711 'R Average daily ambient temperature (Equation 1-3.2) ΔT	average daily min	inimum amplent temperature, Table 7.1-2	IAN	499.30	^R	Average Daily	Liquid Surface Temperature	D	515.42	^R	
SWv = (Mv*PVA)/(R*Tv) Wv 0.001 Equation 1-6, simplified to Equation 1-7 for Uninsulated Tanks ($\Delta TV = 0.7 \Delta TA + 0.02 \alpha$ I) ΔTv Vapor Molecular weight Mv 130 Average daily ambient temperature range ΔTA Constant R 10.7310 Average daily ambient temperature range ΔTA Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0066 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average Daily Liquid Surrace Temperature Tv 518.7138 Partially Insulated - Equation 1-8 ($\Delta TV = 0.6 \Delta TA + 0.02 \alpha$ R) ΔTv Aurage daily ambient temperature range ΔTA Average daily ambient temperature range ΔTA Aurage daily total solar insolation on a horizontal surface, Btu/(ft2 day) I I Average daily ambient temperature range ΔTA Aurage daily ambient temperature (Equation 1-30) TAA 508.2 (R I I I Liquid buik temperature (Equation 1-31) TB 511.4 (R Fully Insulated ΔV I I Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1180.0 Average daily ambient temperature (Equation 1-3: $\Delta V = PVX - PVX$ ΔV Tv = 0.7*TAA						Atmospheric F	ressure	PA	14.59	psia	
S We (MV PVA/(R 1V) WV 0.0001 Equation 1-5, simplified to Equation 1-7 for Uninsulated Tarks (ATV = 0.7 ATA + 0.02 dT) ATV Vapor Molecular weight MV 130 Average daily ambient temperature range ATA Constant R 10.7310 Average daily ambient temperature range atA Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0056 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average Daily Liquid Surface Temperature Tv 518.7138 Partially Insulated - Equation 1-3 (ΔTV = 0.6 ΔTA + 0.02 αR) ΔTV A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tv 518.711 R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-6 αR Tv = 0.7*TAA + 0.3*TB + 0.009*d*1 Tv 518.71 R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Liquid bulk temperature (Equation 1-30) TA 508.2 R 4174 Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1180.0 Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I	10/0/		146.	0.0004		Emerican 4.0 simu		ATH			
Value NV 130 Average daily amoient temperature fange Δ1A Constant R 10.7310 Average daily amoient temperature fange Δ1A Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0056 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average Daily Liquid Surrace Temperature Tv 518.7138 Partially Insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I) ΔTV A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tank roof surface solar absorptance, dimensionless, Table 7.1-6 αR A verage daily ambient temperature (Equation 1-32) TV 518.711 *R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-77 I A verage daily ambient temperature (Equation 1-30) TAA 508.2 *R I I Liquid bulk temperature (Equation 1-31) TB 511.4 *R Fully Insulated ΔIV I Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1180.0 Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN) ΔPV Partially Insulated FRT; see Equation 1-30) TAA 508.2 *R Vapor pressure ath average daily max liquid surface temp, (Eq. 1-25 or 1-26 using	$WV = (MV^PVA)/(I$	(R^IV)	VVV	0.0001		Equation 1-6, simp	lifted to Equation 1-7 for Uninsulated Tanks ($\Delta IV = 0.7 \Delta IA + 0.02 \alpha I$)		33.70	10	
Constant R 10.7310 Average tank surface solar absorptance, dimensionless, rable 7.1-5 d Equation 1-25 PvA = exp(A-(B/TLA)) PvA 0.0056 dily total solar insolation on a horizontal surface, Btw/(ft2 day) I Average Daily Liquid Surrace Temperature Tv 518.7138 Partially Insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αRi) ΔTV AUminsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tv 518.71 R Average daily ambient temperature range ΔTA Auverage daily ambient temperature (Equation 1-30) TAA 508.2 'R I I Average daily total solar insolation factor, Btw/(ft2 day); Table 7.1-7 I Daily total solar insolation on a horizontal surface, Btw/(ft2 day) TB 511.4 'R Fully insulated AV AVerage daily ambient temperature (Equation 1-31) ΔTV Daily total solar insolation on a horizontal surface, Btw/(ft2 day) I 1180.0 Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN) ΔPV Partially Insulated FRT; see Equation 1-30 TA 520.09<''R	Vapor Molecular	weight	MV	130		Average daily	ampient temperature range	ΔΙΑ	17.8	٦R	
Lequation 1-25 PVA = exp(A-(B/TLA)) PVA 0.0056 daily total solar insolation on a horizontal surface, Btu/(ft2 day) I Average Daily Liquid Surrace Temperature Tv 518.7138 Partially Insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I) ΔTv A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tank roof surface solar absorptance, dimensionless, Table 7.1-6 αR Tv = 0.7*TAA + 0.3*TB + 0.009*α*I Tv 518.71 *R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Average daily ambient temperature (Equation 1-30) TAA 508.2 'R Image: Comparison of the compa	Constant		R	10.7310		Average tank	surface solar absorptance, dimensionless, Table 7.1-6	α	0.90		
Nervinge Daily Liquid Surface Temperature IV 518.7138 Partially Insulated - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I) ΔTV A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Average daily ambient temperature range ΔTA A Verage daily ambient temperature (Equation 1-30) TA 518.71 'R Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-6 αR Average daily ambient temperature (Equation 1-30) TAA 508.2 'R Image: Comparison of the compari	Equation 1-25 Pv	vA = exp(A-(B/TLA))	PVA	0.0056		dally total sola	r insolation on a horizontal surface, Btu/(tt2 day)		1180.00		
Partially insulated - Equation 1-32 ($\Delta 1V = 0.6 \Delta IA + 0.02 \Delta K$ I) ΔIV A Uninsulated FRT; see Equation 1-32 simplified to Equation 1-33Tank roof surface solar absorptance, dimensionless, Table 7.1-6 ΔR Tv = 0.7*TAA + 0.3*TB + 0.09*c*ITv 518.71 'RAverage daily ambient temperature (Equation 1-30)TAA508.2 *RLiquid bulk temperature (Equation 1-31)TB511.4'RFully InsulatedAverage daily and insolation factor, Btu/(ft2 day); Table 7.1-7ITank paint solar absorptance, dimensionless, Table 7.1-6 α 0.9IIIDaily total solar insolation on a horizontal surface, Btu/(ft2 day)I1180.0Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: $\Delta PV = PVX - PVN$) ΔPV Partially Insulated FRT; see Equation 1-34Tv520.09'RAverage daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PvX = ex PVX Tv = 0.6*TAA + 0.4*TB + 0.0*TR*TAA508.2 *RAverage daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25\Delta TV from Figure 7.1-17TLXAverage daily ambient temperature (Equation 1-30)TAA508.2 *RAverage daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25\Delta TV from Figure 7.1-17Tank roof surface solar absorptance, dimensionless, Table 7.1-6 αR 0.90Fully InsulatedI = 0.05*TAA + 0.4*TB + 0.01*GR*ITV520.09'RAverage daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25\Delta TV from Figure 7.1-17Tx = 0.6*TAA + 0.4*TB + 0.01*GR*ITV520.09'RAverage daily maximum liquid surface	Average Daily Liq	quio Surrace Temperature	IV	518.7138		Dertielle broch		ATH		*D	
AUninsulated FRT; see Equation 1-32 simplified to Equation 1-33 AVerage daily amoient temperature range ATA AUninsulated FRT; see Equation 1-32 simplified to Equation 1-33 Tov 518.71 Tank roof surface solar absorptance, dimensionless, Table 7.1-6 dR Average daily ambient temperature (Equation 1-30) TAA 508.2 'R Image: Comparison of the comparison of th				ł			anhiant tomporatura range		326.16	™ *D	
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IV 518./1 TK Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7 I Average daily ambient temperature (Equation 1-30) TAA 508.2 *R I Liquid bulk temperature (Equation 1-31) TB 511.4 *R Fully Insulated Δ1v Tank paint solar absorptance, dimensionless, Table 7.1-6 α 0.9 I I Δ1v Tank paint solar absorptance, dimensionless, Table 7.1-6 α 0.9 I I 180.0 Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN) ΔPV Partially Insulated FRT; see Equation 1-34 Vapor pressure at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; Pvx = ext PVX Vapor pressure at the average daily min liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1) TLX Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1) Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1) Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surfac	Uninsulated FRT	CI; see Equation 1-32 simplified to Equation 1-33	T.,	F40 -1	*D	I ank root surfa	ace solar absorptance, dimensionless, Table 7.1-6	aR	0.90		
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Liquid buik temperature (Equation 1-51) The Primy insulated Primy insulated Difference Differ	Average daily am	noient temperature (Equation 1-30)	TP	508.2	к *D	Fully Inculated		ATV	0.00	*D	
Tails paints solar absorptance, uninerstontess, rable 7.1-0 α 0.9 Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1180.0 Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN) ΔPV Partially Insulated FRT; see Equation 1-34 Vapor pressure at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PvX = ext PVX Tv = 0.6*TAA + 0.4*TB + 0.01*αR*I Tv 520.09 *R Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1] TLX Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLN = TLA + 0.25ΔTV from Figure 7.1-1] TLX Tank roof surface solar absorptance, dimensionless, Table 7.1-6 aR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.0 ΔPV	Tank naist sel	chaerstance dimensionless T-LL 74.0	10	511.4	rt	runy insulated		414	0.00	n.	
Average daily vapor Pressure kange for uninsulated integration 1-3: ΔPV = PVX - PVX ΔPV Partially Insulated FRT; see Equation 1-34 Vapor pressure at the average daily maximum liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PVX = ext PVX Tv = 0.6*TAA + 0.4*TB + 0.01*GR*1 Tv 520.09 *R Average daily maximum liquid surface temp, Eq. 1-25 or 1-26 using TLX; PVX = ext PVX Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-17 TLX Liquid bulk temperature (Equation 1-31) TB 511.4 *R Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25ΔTV from Figure 7.1-17 TLN Liquid bulk temperature (Equation 1-31) TB 511.4 *R Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25ΔTV from Figure 7.1-17 TLN Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00 IPV	Tank paint solar a	absorption on a horizontal surface. Dtu//ft2 dau	a	0.9		Avorago Dellu V	pr Processo Pange for Uninculated Tanks (Equation 4.0: ADV - DV/V - DV/V)	APV	0.00104	ncia	
Partially Insulated FRT; see Equation 1-34 Vapor pressure at the average daily mix inquisition targe temp, (Eq. 1-25 or 1-26 using TLX; PVX = eX[PVX] Tv = 0.6*TAA + 0.4*TB + 0.01*aR*1 Tv 520.09 *R Average daily mixinguisity avrace temp, (Eq. 1-25 or 1-26 using TLX; PVX = eX[PVX] Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1) Liquid bulk temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLN = TLA + 0.25ΔTV from Figure 7.1-1) Tank roof surface solar absorptance, dimensionless, Table 7.1-6 aR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00 (Equation 1-10: ΔPB = PBP - PBV)	Daily lotal solar in	insolation on a nonzontal surface, Btu/(It2 day)	+	1180.0		Average Daily Vap	or Fressure Range for Uninsulated Lanks (Equation 1-9: ΔPV = PVX - PVN)		0.00164	poid	
Partially insulated r N1; see Equation 1-34 Vapor pressure at the average daily mini inquis surface temp, Eq. 1-25 or 1-26 using TLX; PVR = extPVN Tv = 0.6*TAA + 0.4*TB + 0.01*aR*1 Tv 520.09 *R Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1 TLX Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLN = TLA + 0.25ΔTV from Figure 7.1-1 TLX Liquid bulk temperature (Equation 1-31) TB 511.4 *R Tank roof surface solar absorptance, dimensionless, Table 7.1-6 aR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00 IAPR	Destielly Inc.	ted EDT: and Equation 4.24	+			vapor pressur	e at the average daily maxingulu surface term, (Eq. 1-25 or 1-26 using TLX; PVX = 6)		0.00586	poid	
IV SZU.09 K Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1] TLX Average daily ambient temperature (Equation 1-30) TAA 508.2 *R Average daily minimum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1] TLN Liquid bulk temperature (Equation 1-31) TB 511.4 *R Tank roof surface solar absorptance, dimensionless, Table 7.1-6 aR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00 IVE		14TP + 0.01*~P*1	TV	500.00	*D	vapor pressur	e at the average daily min liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PVN = ex		0.00422	µsia ∗¤	
Average dary animenation emperature (Equation 1-30) IAA 300.2 R Average dary minimum indud surace temperature, deg R (1LN = 1LA - 0.20LV from Hgure 7.1-1/1LN Liquid bulk temperature (Equation 1-31) TB 511.4 R Tank roof surface solar absorptance, dimensionless, Table 7.1-6 dR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00 I/Entertained	IV = U.O. IAA + U.	U.+ ID + U.UT UR I		520.09	*0	Average daily	maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-		516.63	*D	
Liquid buik temperature (Equation 1-51) 15 511.4 K Tank roof surface solar absorptance, dimensionless, Table 7.1-6 αR 0.90 Fully Insulated Daily total solar insolation on a horizontal surface, Btu/(ft2 day) I 1,180.00	Average daily am	erature (Equation 1-30)	TD	508.2	r. *D	Average daily	minimum inquid surface temperature, deg R (TEN = TEA - 0.25ΔTV from Figure 7.1-1		507.00	IN .	
rain tool survace solar absorptione, uniferiationess, ratio unit 0.50 ruity instrated Difference Difference <thdifference< th=""> Difference</thdifference<>	Tank roof ourfood	e solar absorntance, dimensionloss, Table 7.1.6	1B	511.4	ĸ	Fully Insulated		۸Pv	0.00	neia	
Larry total solar insolation on a nonzontal surface, Btu/(tz day) I 1,100.00 (Equation 1-10: ΔPB = PBP - PBV) IAPB	Deily tet-1		uri	0.90		runy insulated			0.00	hoig	
ILEQUATION 1-10: OPB = PBP - PBV)	Daily total solar in	insolation on a norizontal surface, Btu/(ft2 day)	1	1,180.00		(Equation 4.40: AD			0.00		
	Fully in 1.4			ł		(Equation 1-10: ΔP		DDDD	0.06		
runy insulated Breather Vent Setting Range (Default Assumption: +/- 0.03) PBP Turn TD Turn TD Fill Fill	rully insulated		Tre	F44 00	*D	Breather Vent	Setting Range (Default Assumption: +/- 0.03)	PBY	0.03	psi	
1V 511.39 ¹ K PBV	IV = IB		IV	511.39	"K			PRA	-0.03	psi	
			TO		10			+			
Liquia Bulk Temperature; Eq. 1-31: 18 = 1AA + 0.003 as 1 18 511.39 "K Total Losses (Eq.1-1: LT = Ls+Lw) LT	Liquid Bulk Temp	perature; Eq 1-31: IB = IAA + 0.003 αs I	IB TAA	511.39	⁻ K	i otal Losses (Eq.1	-1: LI = LS+LW)	LT	1,650.98	ib/yr	
Average cally ambient temperature (EqUation 1-30) IAA 508.20	Average daily am	ncient temperature (Equation 1-30)	IAA	508.20		<u> </u>		<u> </u>			
tank shell solar absorptance, dimensionless, Table 7.1-6 os 0.90 A 12.101	tank shell solar a	absorptance, dimensionless, Table 7.1-6	αs	0.90		Å	12.101				
cally total solar insolation on a nonzontal sufface, btu/(ttz day) I 1,180.00 B 3997	dally total solar in	nsolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00		в	0301				

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	Tank 64		Tank type Fixed Roof Tank			Date		07/09/20	
Material stored	Distillate		Company	Global		erformed by		Nicole Brower	
City	Albany		State	New York					
Description	Aboveground Storage Tank								
						CALCULATIONS			
	IN OF BAIA	1		Units		SAEGSEA HONG	Symbol		Units
				01113			Cymbol		onita
		Cumha		Unite	Standing Lassas (F	- 1 2: 1 265 ()//: * W//: * KE * Ko)	1.0	054	lh/ur
	•	Symbo		Units	Standing Losses (E	(q.1-2: LS = 365 (VV * WV * KE * KS)	LS	854	id/yr
Product Information	ion				Vapor Space V	olume; see Equation 1-3	VV	292095.5	π3
Vapor Molecular	rweight	Μv	130	Lb/lb-mole	Stock Vapor De	ensity	Wv	0.0001	lb/tt3
					Vapor Space E	ixpansion Factor (0 < KE <= 1); see Equation 1-5	KE	0.061382	per day
Tank design data					Vented Vapor	Saturation Factor	Ks	0.99	NA
Shell height		Hs	45.00		Constant; Num	ber of Daily Events in a Year	365	365	days/year
Diameter		D	125.00	ft					
Tank volume			3,690,540	gallons	Working Losses (E	g.1-35: LWD=[((0.943)QCsWL)/D]*[1+(NcFc/D)])	Lw	768.03	lb/yr
Turnovers		N	101.63	0	Annual through	iout	Q	8.930.619	bbl/vr
Throughput		0	375 086 001	nal/vr	Shell clingage	factor: see Table 7 1-10	Cs.	0.0015	bbl/1 000 ft2
Roof Type:	Cone or Dome	~	Cone	gust	Average organ	ic liquid density	WI	7 10	lb/gal
If Cono:			Conc		Tank diameter		D	125.00	15/901 #
TI Cone.	1 //(1 0.0005)	0.0		0.0	Tarik ulameter		0	125.00	IL
Tank cone roof s	slope (If unknown, use 0.0625)	SR	0.0625	π/π	Constant		0.943	0.94	1,000 ft3^gal/bbl2
If Dome					Number of fixe	d roof support columns	NC	8.00	NA
Tank dome roof r	radius (If unknown, use tank diameter (D) or (2Rs))	RR	125.00	ft	Effective colum	in diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft
Number of fixed i	roof support columns	Nc	8.00	NA					
Tank Color (see	Paint Tab)		Blue		Vapor Space Volum	ne (Eq.1-3: Vv = ((Pi / 4) D^2)Hvo	Vv	292,095.51	ft3
Breather Vent Se	etting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi	Tank diameter		D	125.00	ft
1		PBV	-0.03	psi	Vapor Space C	Dutage; see Equation 1-16	Hvo	23,80	ft
Shell clingage far	actor: see Table 7.1-10	Cs	0.0015	bbl/1.000 ft2		v , 1 ²²²		0	1
Average organic	liquid density	WI	7 10	lb/gal	Vanor Space Outag	e (Eg. 1-16: Hvo=Hs-HI +HRQ	Hvo	23 80	ft
Average organic	inquia density	VVL	7.10	ib/gai	Topk shall hais	e (Eq. 1-10. 1100-113-11E-11100	He	45.00	A
Average Delle Lin	uid Curfage Temperature				Liquid Liquid Height	III.		45.00	n 4
Average Daily Liq	una surrace remperature				Liquid Height (sypically assumed to be at nait-tuil level)	HL	22.50	n.
Uninsulated FR	T; see Equation 1-27 simplified to Equation 1-28				Roof Outage (f	or a Cone Roof vs Dome Roof)	HRO	1.30	ft
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*Ι	TLA	515.42	*R					
Average daily arr	mbient temperature (Equation 1-30)	TAA	508.2	*R	Roof Outage - Cone	e Roof (Eq. 1-17 & 1-18: HRO=(1/3)SR*Rs)	HRO	1.30	ft
Liquid bulk tempe	perature (Equation 1-31)	TB	511.4	*R	Tank cone root	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9		Tank shell radi	US	Rs	62.50	ft
Daily total solar in	insolation on a horizontal surface. Btu/(ft2 day)	1	1180.0						
	Average Daily Liquid Surface Temperature:	ľ.	55.7	*F	Roof Outage - Dome	Roof (Eq. 1.19 & 1.20; HRO=(RR-(RR^2-Re^2)^0 5)*(0.5+0.16667)(RR-(RR^2-Re^2)^0 5)	/HRO	8 57	ft
	Average Daily Eight Surface Temperature.		55.1	1	Tonk domo roo	fradius (If unknown, use tenk diameter (D) or (2De))		105.00	A
Dentielles In esslet	ted EDT: and Equation 4.00				Tarik dome roo		RR De	125.00	1L
Partially insulat	ted FRI; see Equation 1-29				Tank shell radi	us	ĸs	62.50	π
1LA = 0.3*1AA +	+ 0.7*1B + 0.005*αR*I	ILA	515.74	*R					
Average daily arr	mbient temperature (Equation 1-30)	TAA	508.2	*R	Vented Vapor Satur	ration Factor (Eq. 1-21: Ks = 1/(1+0.053*PvA*Hvo))	Ks	0.99	
Liquid bulk tempe	erature (Equation 1-31)	TB	511.4	*R	Vapor Pressure	e at Avg Daily Liq Surface Temp	PvA	0.0056	psia
Tank roof surface	e solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Vapor Space C	Dutage; see Equation 1-16	Hvo	23.80	ft
Daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	1	1,180.00						
,	Average Daily Liquid Surface Temperature:		56.0	*F	Vapor Space Expan	ision Factor (Eq. 1-5; (ΔTv/TLA)+[(ΔPv-ΔPB)/(PA-PvA)]	KE	0.06	per day
					Average Daily	Vapor Temperature Range	ΔΤν	33.70	*R
Average Daily Am	nbient Temperature: see Equation 1-30				Average Daily	Vapor Pressure Range	ΔPv	0.00	nsi
$T\Delta \Delta = ((T\Delta X + T\Delta X))$		ΤΔΔ	508.20	*R	Breather Vent	Pressure Setting Range	٨PB	0.06	nsi
	avimum ambient temperature. Table 7.1.0	TAX	E17.10	*D	Vanar Drassur	a at Ava Daily Lia Surface Temp	D. A	0.0056	201
average daily ma		TAN	517.10	R +D	vapor Pressure	e al Avg Dally Liq Sunace Temp	PVA TLA	0.0056	psia
average daily min	inimum ambient temperature, Table 7.1-2	TAN	499.30	-K	Average Daily		ILA	515.42	-R
					Atmospheric P	ressure	PA	14.59	psia
Stock Vapor Densit	ity; see Equation 1-22						_		
Wv = (Mv*PVA)/(((R*1v)	Wv	0.0001		Equation 1-6, simpl	ified to Equation 1-7 for Uninsulated Tanks ($\Delta TV = 0.7 \Delta TA + 0.02 \alpha$ l)	ΔIV	33.70	
Vapor Molecular	rweight	Μv	130		Average daily a	ambient temperature range	ΔTA	17.8	*R
Constant		R	10.7310		Average tank s	urface solar absorptance, dimensionless, Table 7.1-6	α	0.90	
Equation 1-25 Pv	vA = exp(A-(B/TLA))	PvA	0.0056		daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.00	
Average Daily Lic	iquid Surrace Temperature	Τv	518.7138						
<u> </u>		1			Partially Insulated	- Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I)	ΔTv	326.16	*R
Average Vapor Te	emperature				Average daily a	ambient temperature range	ΔΤΑ	508 20	*R
Uninsulated ED	T: see Equation 1-32 simplified to Equation 1-22				Tank roof eurfo	ice solar absorptance, dimensionless, Table 7.1-6	۳R	0.00	
$T_V = 0.7 * T \wedge \Lambda + 0$	0.3*TR + 0.000***	Tv	E10 74	*D		not solar assorptioned, uniterisionices, rable 7.1-0		0.90	
1V = 0.7 1AA + 0			518./1	*D	Average daily t	utai suiai insulatiun idülui, Diu/(ILZ Udy), Table 7.1-7	-	1180.00	
Average daily an	ncient temperature (Equation 1-30)	TAA	508.2	-K			AT:		10
Liquid bulk tempe	perature (Equation 1-31)	IB	511.4	٦K	Fully Insulated		ΔΙV	0.00	ък
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9						
Daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Average Daily Vapo	or Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)	ΔPv	0.00164	psia
		Γ			Vapor pressure	e at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; Pvx = ex	qPVX	0.00586	psia
Partially Insulat	ted FRT; see Equation 1-34	Γ			Vapor pressure at the average daily min liquid surface temp, (Eq. 1-25 or 1-26 using TLX: PvN = ex		(PVN	0.00422	psia
Tv = 0.6*TAA + 0.6*TAA	0.4*TB + 0.01*αR*I	Τv	520.09	*R	Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ATV from Figure 7 1-1		1 TLX	516.63	*R
Average daily an	mbient temperature (Equation 1-30)	TAA	508 2	*R	Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1		7 TLN	507.00	*R
Liquid bulk temp	perature (Equation 1-31)	TB	511 4	*R			I	507.00	1
Tank roof ourfeet	e colar absorntance, dimensionloss, Table 7.1.6	dB	0.00	IX.	Fully Inculated		AP _V	0.00	neia
		un	0.90		i uny msulateu		<u></u> ч	0.00	hoig
Daily total solar in	insolation on a norizontal surface, Btu/(ft2 day)	<u> </u>	1,180.00		(Farradian 1.10				
I					(Equation 1-10: ΔPI	3 = PRF - PRV)	ΔРВ	0.06	
Fully Insulated					Breather Vent	Setting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi
Tv = TB		Τv	511.39	*R			PBV	-0.03	psi
ľ									
Liquid Bulk Temp	perature; Eq 1-31: TB = TAA + 0.003 αs I	TB	511.39	*R	Total Losses (Eq.1-	1: LT = Ls+Lw)	LT	1,622.14	lb/yr
Average daily an	mbient temperature (Equation 1-30)	TAA	508.20			,		,	
tank shell solar a	absorptance dimensionless Table 7 1-6	as .	0 00		А	12.101	•		
daily total solar in	neglation on a horizontal surface. Dtu//ff2 dou/	1	1 190 00	1	в	8907			

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Table 1							
TANK EMISSION CALCULATION							
(Note - Cells in pink are input cells. All other cells are calculated cells.)							

Tank No.	Tank 33		Tank type Fixed Roof Tank			Date		07/09/20	1		
Material stored	Distillate		Company Global			Performed by			Nicole Brower		
City	Albany		State	New York							
Description	Aboveground Storage Tank										
					r	CALCULATIONS		<u> </u>			
-				Units		SAEGGER HONO	Symbo		Units		
-				onita			Cynibol		01113		
		Cumba		Unite	Standing Lagons /F	- 1 2. Lo - 205 (/// *)/// * KE * Ko)	1.0	954	lb /ur		
Due due the former of	1	Symbo	1	Units	Standing Losses (E	(q. 1-2; LS = 365 (VV * VV * RE * RS)	LS	000	ib/yi		
Product Informati	ion		100		vapor Space v	olume; see Equation 1-3	VV	292095.5	π3		
vapor Molecular	weight	MV	130	Lb/ib-mole	Stock Vapor D	ensity	VVV	0.0001	lb/π3		
					Vapor Space E	expansion Factor (0 < KE <= 1); see Equation 1-5	KE	0.061382	per day		
Tank design data					Vented Vapor	Saturation Factor	Ks	0.99	NA		
Shell height		Hs	45.00		Constant; Num	ber of Daily Events in a Year	365	365	days/year		
Diameter		D	125.00	ft							
Tank volume			3,801,825	gallons	Working Losses (E	q.1-35: LWD=[((0.943)QCsWL)/D]*[1+(NcFc/D)])	Lw	791.19	lb/yr		
Turnovers		N	101.63		Annual through	iput	Q	9,199,914	bbl/yr		
Throughput		Q	386,396,391	gal/yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2		
Roof Type:	Cone or Dome		Cone	<u>,</u>	Average organ	ic liquid density	WL	7.10	lb/gal		
If Cone:					Tank diameter	1	D	125.00	ft		
Tank cone roof s	slope (If upknown, use 0,0625)	SR	0.0625	ft/ft	Constant		0.943	0.94	1 000 ft3*gal/bbl2		
If Dome		OIX	0.0020	ion	Number of five	d roof support columns	Nc.	8.00	NA		
Tank domo roof	radius (If unknown, use tank diameter (D) or (2Ba))	DD	125.00	#	Effective colum	n diameter: 1.1.0.7. or 1.0	Fo	1.10	11A		
Number of fixed		No	125.00	IL NIA	Ellective coluit		FU	1.10	n		
Number of fixed		INC	8.00 Blue	NA				000 005 54	40		
Tank Color (see	raint rau)	000	Blue		vapor space volun	ie (Eq.1-3: VV = ((P1/4) U^2)HVO	VV	292,095.51	11.3		
Breather vent Se	etting Range (Default Assumption: +/- 0.03)	PBP: :	0.03	psi	I ank diameter		U	125.00	π		
		PBV	-0.03	psi	Vapor Space C	Dutage; see Equation 1-16	Hvo	23.80	ft		
Shell clingage fa	ictor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2	l			L			
Average organic	liquid density	WL	7.10	lb/gal	Vapor Space Outag	e (Eq. 1-16: Hvo=Hs-HL+HRO	Hvo	23.80	ft		
					Tank shell heig	ht	Hs	45.00	ft		
Average Daily Liq	uid Surface Temperature				Liquid Height (typically assumed to be at half-full level)	HL	22.50	ft		
Uninsulated FR	T; see Equation 1-27 simplified to Equation 1-28				Roof Outage (f	or a Cone Roof vs Dome Roof)	HRO	1.30	ft		
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I	TLA	515.42	*R							
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Roof Outage - Cone	e Roof (Eg. 1-17 & 1-18; HRO=(1/3)SR*Rs)	HRO	1.30	ft		
Liquid bulk temp	erature (Equation 1-31)	TB	511.4	*R	Tank cone root	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft		
Tank naint solar	absorptance dimensionless Table 7 1-6	a	0.9		Tank shell radi	118	Rs	62.50	ft		
Daily total solar in	insolation on a horizontal surface. Btu/(ft2 day)	u I	1180.0		Turik Sheir Tudi		110	02.00			
Daily total 30iai i	Average Daily Liquid Surface Tomporature:		55.7	*⊏	Boof Outogo Domo	Boof (Eg. 1.10.8.1.20; HEO-(BB (BBA2 BoA2)A0 E)*(0 E+0.16667/(BB (BBA2 BoA2)A0)		9 57	4		
	Average Daily Liquid Surface Temperature.		55.7	F	Kool Outage - Donie	Rooi (Eq. 1-19 & 1-20. HRO-(RR-(RR-2-RS-2)-0.5) (0.5+0.16667((RR-(RR-2-RS-2)-0.5		6.57	1L A		
Deutielle Inseulet	ted EDT. and Equation 4.00				Tank dome roo	if radius (if unknown, use tank diameter (D) or (2RS))	RR D-	125.00	Π		
Partially insulat	ted FRI; see Equation 1-29				Tank shell radi	us	RS	62.50	π		
1LA = 0.3*1AA +	+ 0.7*1B + 0.005*αR*I	ILA	515.74	*R							
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R	Vented Vapor Satur	ration Factor (Eq. 1-21: Ks = 1/(1+0.053*PvA*Hvo))	Ks	0.99			
Liquid bulk tempe	erature (Equation 1-31)	TB	511.4	*R	Vapor Pressure	e at Avg Daily Liq Surface Temp	PvA	0.0056	psia		
Tank roof surface	e solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Vapor Space C	Dutage; see Equation 1-16	Hvo	23.80	ft		
Daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00								
	Average Daily Liquid Surface Temperature:		56.0	*F	Vapor Space Expar	ision Factor (Eq. 1-5: (ΔTv/TLA)+[(ΔPv-ΔPB)/(PA-PvA)]	KE	0.06	per day		
					Average Daily	Vapor Temperature Range	ΔTv	33.70	*R		
Average Daily Am	nbient Temperature; see Equation 1-30				Average Daily	Vapor Pressure Range	ΔPv	0.00	psi		
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R	Breather Vent	Pressure Setting Range	ΔPB	0.06	psi		
average daily ma	aximum ambient temperature Table 7 1-2	ТАХ	517 10	*R	Vapor Pressur	e at Avo Daily Lio Surface Temp	PvA	0.0056	nsia		
average daily mit	inimum ambient temperature. Table 7 1-2	ΤΔΝ	499.30	*R	Average Daily	Liquid Surface Temperature		515.42	*R		
average daily min		17.43	400.00	IX	Atmospheric P		P _A	14.50	nsia		
Ctack Vanar Danai	ity and Equation 1.22				/ anospherie i		· A	14.59	pold		
$M_{V} = (M_{V} + D_{V})^{2}$	(D*T_v)	10/1/	0.0004		Equation 1.6 cime	ified to Equation 1.7 for Uninculated Tanks ($\Delta T V = 0.7 \Delta T \Delta \pm 0.02 \approx V$	ATV		t		
VVV = (IVIV PVA)/(VVV	0.0001		Equation 1-6, simpl			33.70	+D		
vapor Molecular	weight		130		Average daily a	ambient temperature range	ΔIA	17.8	R		
Constant		к	10.7310		Average tank s	urrace solar absorptance, dimensionless, I able 7.1-6	α	0.90	ļ		
Equation 1-25 PV	vA = exp(A-(B/TLA))	PvA	0.0056		daily total solar	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.00	l		
Average Daily Lie	quid Surrace Temperature	ſ٧	518.7138		L			L	l		
					Partially Insulated	- Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I)	ΔTv	326.16	*R		
Average Vapor Te	emperature				Average daily a	ambient temperature range	ΔTA	508.20	*R		
Uninsulated FR	T; see Equation 1-32 simplified to Equation 1-33				Tank roof surfa	ce solar absorptance, dimensionless, Table 7.1-6	αR	0.90	1		
Tv = 0.7*TAA + 0	0.3*TB + 0.009*α*I	Τv	518.71	*R	Average daily t	otal solar insolation factor, Btu/(ft2 day); Table 7.1-7	1	1180.00			
Average daily an	nbient temperature (Equation 1-30)	TAA	508.2	*R				1			
Liquid bulk temp	erature (Equation 1-31)	ТВ	511.4	*R	Fully Insulated		ΔTv	0.00	*R		
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9		· · · · · ·						
Daily total solar in	insolation on a horizontal surface. Btu/(ft2 dav)	1	1180.0		Average Daily Vand	or Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)	ΔPv	0.00164	psia		
					Vapor pressure	at the average daily max liquid surface temp. (Eq. 1-25 or 1-26 using TLX: Pvy =	X PVX	0.00586	psia		
Partially Inculat	ted ERT: see Equation 1-34				Vanor presour	at the average daily min liquid surface temp. (Eq. 1.26 or 1.26 using TLX, TVX = 6		0.00500	nsia		
$T_{V} = 0.6*TAA + 0$	0.4*TR + 0.01*aP*I	Tv	E20 00	*D		, at the average daily miningula surface temp, (Eq. 1-20 of 1-20 doing TEA, PVN = to p_{12} and p_{23} a		546.00	*D		
IV - U.O IAA + U	nhiont temperature (Equation 1.20)	TAA	520.09	*D	Average dally i	maximum liquid surface temperature, deg P_{T} (1LA = 1LA + 0.25ATV from Figure 7.1		516.63	*D		
Average daily an	noient temperature (Equation 1-30)	TAA	508.2	7	Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25∆TV from Figure 7.1-17		ILN	507.00	R		
Liquid bulk temp	erature (Equation 1-31)	18	511.4	ък					lasta "		
I ank root surface	e solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Fully Insulated		ΔPV	0.00	psia		
Daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00		L				· · · · · · · · · · · · · · · · · · ·		
					(Equation 1-10: ΔP	3 = PBP - PBV)	ΔPB	0.06			
Fully Insulated					Breather Vent	Setting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi		
Tv = TB		Τv	511.39	*R			PBV	-0.03	psi		
								[
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	511.39	*R	Total Losses (Eq.1-	1: LT = Ls+Lw)	LT	1,645.30	lb/yr		
Average daily an	nbient temperature (Equation 1-30)	TAA	508.20			,	1	.,			
tank shell color	absorptance dimensionless Table 7.1-6	as .	0.00		А	12.101	-		<u> </u>		
daily tatal calar in	abourptance, uniterioreneos, Table 7.1-0	100	1 190 00			9007					

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Table 1							
TANK EMISSION CALCULATION							
(Note - Cells in pink are input cells. All other cells are calculated cells.)							

Tank No.	Tank 30		Tank type Fixed Roof Tank			Date		07/09/20	
Material stored	Distillate		Company Global			Performed by		Nicole Brower	
City	Albany		State	New York					
Description	Aboveground Storage Tank								
	INPUT DATA					CALCULATIONS			
		1		Units			Symbol		Units
							- j		
		Sumbo		Unite	Standing Laccos /	a 1 2: 1 a - 265 (\// * \// * KE * Ka)	1.0	954	lb/ur
Broduct Informati	lon	Symbo		Units	Vapor Space V	(quine: see Equation 1.2	LS	202005.5	10/yi #2
Floudet Informati			400	L b //b as a la	Vapor Space V	olume, see Equation 1-5	V V	292095.5	11.3
vapor molecular	weight	IVIV	130	LD/ID-IIIOle	Slock Vapor D	ensity	VVV	0.0001	ID/ILS
					Vapor Space E	expansion Factor (U < KE <= 1); see Equation 1-5	KE .	0.061382	perday
Tank design data					Vented Vapor	Saturation Factor	Ks	0.99	NA
Shell height		Hs	45.00		Constant; Nurr	ber of Daily Events in a Year	365	365	days/year
Diameter		D	125.00	ft					
Tank volume			3,829,140	gallons	Working Losses (E	q.1-35: LWD=[((0.943)QCsWL)/D]*[1+(NcFc/D)])	Lw	796.88	lb/yr
Turnovers		Ν	101.63		Annual through	iput	Q	9,266,013	bbl/yr
Throughput		Q	389,172,536	gal/yr	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Roof Type:	Cone or Dome		Cone		Average organ	ic liquid density	WL	7.10	lb/gal
If Cone:					Tank diameter		D	125.00	ft
Tank cone roof s	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft	Constant		0.943	0.94	1 000 ft3*gal/bbl2
If Dome		011	0.0020		Number of fixe	d roof support columns	Nc	8.00	NA
Tank dome roof	radius (If unknown, use tank diameter (D) or (2Ps))	PP	125.00	ft	Effective colum	n diameter: 1107 or 10	Fc	1 10	ff
Number of fixed	roof support columns	No	9.00	NA	Lifective colum		10	1.10	
Topk Color (s	Point Tab)	NO.	0.00	1.0.1	Vapor Space Value	$P_{0} = (F_{0} + 2) \cdot (V_{0} = (P_{0} + 4) \cdot D_{0}^{2}) + V_{0}$	Wv	202 005 54	#2
Proother Vient C	railit (a)		Biue	nci	Topk diameter	ie (E4.1-3. VV = ((F1/4) U"2)NVO		292,095.51	11J #
breamer vent Se	euing range (Delauit Assumption: +/- 0.03)		0.03	ры	rank diameter		U	125.00	1L A
		РВЛ	-0.03	psi	vapor Space C	putage; see Equation 1-16	HVO	23.80	π
Shell clingage fa	actor; see Table 7.1-10	Cs	0.0015	DDI/1,000 ft2			L		-
Average organic	liquid density	WL	7.10	lb/gal	Vapor Space Outag	e (Eq. 1-16: Hvo=Hs-HL+HRO	Hvo	23.80	ft
					Tank shell heig	ht	Hs	45.00	ft
Average Daily Liq	quid Surface Temperature				Liquid Height (typically assumed to be at half-full level)	HL	22.50	ft
Uninsulated FR	T; see Equation 1-27 simplified to Equation 1-28				Roof Outage (1	or a Cone Roof vs Dome Roof)	HRO	1.30	ft
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I	TLA	515.42	*R					
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R	Roof Outage - Con	e Roof (Eq. 1-17 & 1-18: HRO=(1/3)SR*Rs)	HRO	1.30	ft
Liquid bulk temp	perature (Equation 1-31)	ТВ	511.4	*R	Tank cone roo	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft
Tank paint solar	absorptance dimensionless Table 7 1-6	a	0.9		Tank shell radi	118	Rs	62.50	ft
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	ũ	1180.0		Turne on on Fud			02.00	
Dully total Solar I	Average Daily Liquid Surface Temperature:	ľ –	55.7	*⊏	Poof Outago - Domo	Poof (Eq. 1.10.8.1.20; UDO-(DD. (DDA2. DoA2)A0.5)*(0.5+0.16667/(DD. (DDA2. DoA2)A0.5	HPO	8 57	ft
	Average Daily Liquid Surface Temperature.		55.7	F	Tonk domo roc	R001 (Eq. 1-19 & 1-20. HRO-(RR-(RR-2-RS-2)-0.3) (0.5+0.10007 ((RR-(RR-2-RS-2)-0.3		105.00	μ 4
Deutielle hereidet	ted EDT: and Equation 4.00				Tank done too		RR De	125.00	1L
	ted FRT; see Equation 1-29	T 1 A		£	Tank shell radi	US	RS	62.50	π
1LA = 0.3^1AA +	+ 0.7^1B + 0.005^aR^1	TLA	515.74	^R					l
Average daily an	mbient temperature (Equation 1-30)	IAA	508.2	*R	Vented Vapor Satu	ration Factor (Eq. 1-21: Ks = 1/(1+0.053*PvA*Hvo))	Ks	0.99	
Liquid bulk temp	erature (Equation 1-31)	TB	511.4	*R	Vapor Pressur	e at Avg Daily Liq Surface Temp	PvA	0.0056	psia
Tank roof surfac	e solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Vapor Space C	Dutage; see Equation 1-16	Hvo	23.80	ft
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00						
	Average Daily Liquid Surface Temperature:		56.0	*F	Vapor Space Expan	ision Factor (Eq. 1-5: (ΔTv/TLA)+[(ΔPv-ΔPB)/(PA-PvA)]	KE	0.06	per day
					Average Daily	Vapor Temperature Range	ΔTv	33.70	*R
Average Daily Am	nbient Temperature; see Equation 1-30				Average Daily	Vapor Pressure Range	ΔPv	0.00	psi
TAA = ((TAX+TA	AN)/2)	TAA	508.20	*R	Breather Vent	Pressure Setting Range	ΔPB	0.06	psi
average daily ma	aximum ambient temperature. Table 7.1-2	TAX	517.10	*R	Vapor Pressur	e at Avg Daily Lig Surface Temp	PvA	0.0056	psia
average daily mi	inimum ambient temperature. Table 7 1-2	TAN	499.30	*R	Average Daily	Liquid Surface Temperature	TLA	515.42	*R
avorago daily mi		.,	100.00		Atmospheric P		PA	14.50	nsia
Stock Vapor Densi	ity: see Equation 1-22						· A	14.55	poid
$M_{\rm M} = (M_{\rm M}*D)/A)/$	//D*Tv)	1467	0.0001		Equation 1.6 cimp	if ind to Equation 1.7 for Uninculated Tanks (ATV = 0.7 ATA + 0.02 α I)	ATV	aa 7 0	ł
Vonor Malaguitar	swoight	M	0.0001			meu to Equation 1-7 foi offinisulateu Taliks (Δ1 V = 0.7 Δ1Α + 0.02 0 l)	ATA	33.70	*D
vapor iviolecular	weight		130		Average daily		11A	17.8	n.
Constant		ĸ	10.7310		Average tank s	urrace solar absorptance, dimensionless, I able 7.1-6	α	0.90	
Equation 1-25 P	vA = exp(A-(B/1LA))	PVA	0.0056		daily total sola	insolation on a horizontal surface, Btu/(tt2 day)	1	1180.00	
Average Daily Li	iquid Surrace Temperature	IV	518.7138				4.75		10
L					Partially Insulated	- Equation 1-8 ($\Delta TV = 0.6 \Delta TA + 0.02 \alpha R I$)	ΔΙν	326.16	^K
Average Vapor Te	emperature	_			Average daily	ambient temperature range	ΔIA	508.20	*K
Uninsulated FR	T; see Equation 1-32 simplified to Equation 1-33				Tank roof surfa	ce solar absorptance, dimensionless, Table 7.1-6	αR	0.90	i
Tv = 0.7*TAA + 0	0.3*TB + 0.009*α*I	Τv	518.71	*R	Average daily	otal solar insolation factor, Btu/(ft2 day); Table 7.1-7	1	1180.00	l
Average daily an	mbient temperature (Equation 1-30)	TAA	508.2	*R					
Liquid bulk temp	perature (Equation 1-31)	TB	511.4	*R	Fully Insulated		ΔTv	0.00	*R
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9				1		
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 dav)	1	1180.0		Average Daily Van	or Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)	ΔPv	0.00164	psia
. ,					Vapor pressure	at the average daily max liquid surface temp. (Eq. 1-25 or 1-26 using TLX: Pvy = e	0 PVX	0 00586	psia
Partially Insulat	ted FRT: see Equation 1-34				Vapor pressure	$r_{\rm e}$ at the average daily min liquid surface temp. (Eq. 1.25 or 1.26 using TLX, TV = 6		0.00380	nsia
$T_{V} = 0.6*TAA + 0$	0.4*TB + 0.01*~D*I	Tv	E20.00	*D		where average daily minimut of a subject the set of th		546.00	*D
	mbiont tomporature (Equation 4.20)	TAA	520.03	*D	Average udily	nasimam liquid surface temperature, deg D (TLN = TLA = 0.25AT) / from Figure 7.4		510.63	*D
Average daily an	norem temperature (Equation 1-30)	TD	508.2	r.	Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25∆TV from Figure 7.1-17			507.00	n.
Liquid bulk temp	perature (Equation 1-31)	18	511.4	ĸ			A Dr.	A	
I ank root surfac	e solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Fully Insulated		ΔΡν	0.00	psia
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	1	1,180.00				1.00	-	
					(Equation 1-10: ΔP	3 = PBP - PBV)	ΔΡΒ	0.06	
Fully Insulated					Breather Vent	Setting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi
Tv = TB		Τv	511.39	*R			PBV	-0.03	psi
									[
Liquid Bulk Tem	perature; Eq 1-31: TB = TAA + 0.003 αs I	ТВ	511.39	*R	Total Losses (Eg.1-	1: LT = Ls+Lw)	LT	1,650.98	lb/yr
Average daily an	mbient temperature (Equation 1-30)	TAA	508.20			,	1	,	
tank shell solar	absorptance dimensionless Table 7 1-6	as .	0 00		А	12.101			
deily tetel color i	and the set a baring stal surface. Btu/(#0 day)	1	4 4 0 0 0 0			9007			

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Table 1
TANK EMISSION CALCULATION
(Note - Cells in pink are input cells. All other cells are calculated cells.)

Tank No.	Tank 33		Tank type	Fixed Roof Tank		Date		07/09/20	
Material stored	Biodiesel		Company	Global		Performed by		Nicole Brower	
City	Albany		State	New York					
Description	Aboveground Storage Tank				-				
	INPUT DATA		-			CALCULATIONS			
				Units			Symbo		Units
		O		l lucito	04		1	7 000	11- 6
Broduct Informati	lion	Symbo		Units	Standing Losses (I	Eq.1-2: LS = 365 (VV * WV * KE * KS) (Un-Heated)	LS	7,392	ID/yr #2
Vapor Molecular	r weight	Mix	120	l b/lb-mole	Stock Vapor D	lensity	W/v	292095.5	lb/ft3
vapor wolecular	i weight	1010	120	Lond-mole	Vanor Snace F	Expansion Factor (0 < KE <= 1): see Equation 1-5	KE	0.0003	ner dav
Tank design data	1				Vented Vapor	Saturation Factor	Ks	0.002101	NA
Shell height	•	Hs	45.00		Constant: Nun	her of Daily Events in a Year	365	365	davs/vear
Diameter		D	125.00	ft					
Tank volume			3,801,825	gallons	Standing Losses	(Eq.1-4: Ls = 365 KE (Pi/4 * D^2) * Hvo * Ks * Wv (HEATED)	Ls	0.2009	lb/yr
Turnovers		N	101.63	J	Tank diameter		D	125.00	ft
Throughput		Q	386,396,391	gal/yr	Stock Vapor D	ensity	Wv	0.0009	lb/ft3
Roof Type:	Cone or Dome		Cone	9	Vapor Space I	Expansion Factor (0 < KE <= 1); see Equation 1-5	KE	0.082157	per day
If Cone:					Vented Vapor	Saturation Factor	Ks	0.06	NA
Tank cone roof s	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft	Constant; Nun	nber of Daily Events in a Year	365	365	days/year
If Dome					Vapor Space (Dutage; see Equation 1-16	Hvo	24	
Tank dome roof	radius (If unknown, use tank diameter (D) or (2Rs))	RR	125.00	ft					
Number of fixed	roof support columns	Nc	8.00	NA	Working Losses (E	q.1-35: LWD=[((0.943)QCsWL)/D]*[1+(NcFc/D)])	Lw	791.19	lb/yr
Tank Color (see	Paint Tab)		Blue		Annual throug	hput	Q	9,199,914	bbl/yr
Breather Vent Se	etting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi	Shell clingage	factor; see Table 7.1-10	Cs	0.0015	bbl/1,000 ft2
Ohall alianana fa		PBV	-0.03	psi	Average organ	nic liquid density	WL	7.10	lb/gal
Shell clingage ta	actor, see Table 7.1-10	US	0.0015	DDI/1,000 π2	Tank diameter		U	125.00	I[4.000.#0t==1/hh10
Average organic	c liquid density	VVL	7.10	ib/gai	Constant Number of five	ad reaf ournest columns	0.943	0.94	1,000 π3"gal/bbl2
Average Daily Lig	guid Surface Temperature				Effortivo colur	no diamotor: 1.1.0.7. or 1.0	INC Fo	8.00	nA #
Average Daily Liq	Quid Surface Temperature				Ellective colui		FU	1.10	11
TI A = 0.4*TAA +	+ 0.6*TB + 0.005*α*1	TI A	587.01	*R	Vapor Space Volur	ne (Eq. 1-3: Vy = ((Pi / 4) D^2)Hyo	Vv	292 095 51	ft3
Average daily an	mbient temperature (Equation 1-30)	TAA	584 7	*R	Tank diameter		D	125.00	ft
Liquid bulk temp	perature (Equation 1-31)	TB	579.7	*R	Vapor Space (Dutage: see Equation 1-16	Hvo	23.80	ft
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9						
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	1	1180.0		Vapor Space Outag	ge (Eq. 1-16: Hvo=Hs-HL+HRO	Hvo	23.80	ft
	Average Daily Liquid Surface Temperature:		127.3	*F	Tank shell hei	ght	Hs	45.00	ft
					Liquid Height ((typically assumed to be at half-full level)	HL	22.50	ft
Partially Insulat	ted FRT; see Equation 1-29				Roof Outage (for a Cone Roof vs Dome Roof)	HRO	1.30	ft
TLA = 0.3*TAA +	+ 0.7*TB + 0.005*αR*I	TLA	586.51	*R					
Average daily an	mbient temperature (Equation 1-30)	TAA	584.7	*R	Roof Outage - Con	e Roof (Eq. 1-17 & 1-18: HRO=(1/3)SR*Rs)	HRO	1.30	ft
Liquid bulk temp	perature (Equation 1-31)	TB	579.7	*R	Tank cone roo	f slope (If unknown, use 0.0625)	SR	0.0625	ft/ft
Tank roof surface	ce solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Tank shell radius F		Rs	62.50	ft
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00						
	Average Daily Liquid Surface Temperature:		126.8	*F	Roof Outage - Dome	Roof (Eq. 1-19 & 1-20: HRO=(RR-(RR^2-Rs^2)^0.5)*(0.5+0.16667((RR-(RR^2-Rs^2)^0.5)/HRO	8.57	ft
					Lank dome ro	of radius (If unknown, use tank diameter (D) or (2Rs))	RR	125.00	ft
Average Daily Am	nbient Temperature; see Equation 1-30	T A A	504.70	*D	I ank shell rad	lus	Rs	62.50	π
TAA = ((TAA+TA	AN//2)		564.70	κ *D	Vented Vener Cetu	rotion Easter (Eg. 4.24; Ka = 4//4+0.052*D:(4*4)(a))	Ka	0.04	
average daily ma	inimum ambient temperature, max tank temperature	TAN	559.70	к *D	Vapor Pressur	ration Factor (Eq. 1-21: KS = 1/(1+0.053 FVA HVO))	RS DγΔ	0.94	neia
average daily mil	ininium ambient temperature, max tank temperature		555.10	IX	Vapor Space (Dutage: see Equation 1-16	HVO	23.80	ff
Stock Vapor Densi	ity: see Equation 1-22				Vapor Space Outage, see Equation 1-16		1100	23.00	it.
Wy = (My*PVA)/	/(R*Tv)	Wv	0 0009		Vapor Space Expa	nsion Factor (Eq. 1-5; (ATv/TI A)+[(APv-APB)/(PA-PvA)]	KE	0.08	ner dav
Vapor Molecular	rweight	Mv	120		Average Daily	Vapor Temperature Range	ΔΤν	50.00	*R
Constant		R	10.7310		Average Daily	Vapor Pressure Range	ΔPv	0.00	psi
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	0.0463		Breather Vent	Pressure Setting Range	ΔPB	0.06	psi
Average Daily Li	iquid Surrace Temperature	Τv	579.7000		Vapor Pressur	e at Avg Daily Liq Surface Temp	PvA	0.0463	psia
	· · · · ·				Average Daily	Liquid Surface Temperature	TLA	579.70	*R
Average Vapor Te	emperature				Atmospheric F	ressure	PA	14.70	psia
Uninsulated FR	RT; see Equation 1-32 simplified to Equation 1-33								
Tv = 0.7*TAA + 0	0.3*TB + 0.009*α*I	Τv	592.76	*R	Equation 1-6, simp	lified to Equation 1-7 for Uninsulated Tanks ($\Delta TV = 0.7 \Delta TA + 0.02 \alpha$ l)	ΔTv	56.24	
Average daily an	mbient temperature (Equation 1-30)	TAA	584.7	*R	Average daily	ambient temperature range	ΔTA	50.0	*R
Liquid bulk temp	perature (Equation 1-31)	TB	579.7	*R	Average tank	surface solar absorptance, dimensionless, Table 7.1-6	α	0.90	
Tank paint solar	absorptance, dimensionless, Table 7.1-6	α	0.9		daily total sola	r insolation on a horizontal surface, Btu/(ft2 day)	I	1180.00	
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Deutielle in suister		ATH		*D
					Partially Insulated	$\Delta - Equation 1-8 (\Delta IV = 0.6 \Delta IA + 0.02 dR I)$		372.06	^R
	0.4*TD + 0.04*~D*	TH	500.00	*D	Average daily	ampient temperature range	Δ1A αD	584.70	R
1V = U.6^1AA + (U.4 ID + U.UT'CK'I		593.32	K *D	Average della	ace solar absorptance, dimensionless, Lable 7.1-6	aR	0.90	
Average daily an	norent temperature (Equation 1-30)	TD	584./	*D	Average daily total solar insolation factor, Btu/(ft2 day); Table 7.1-7		-	1180.00	
Tank roof surface	ce solar absorptance, dimensionless, Table 7.1-6	αR	5/9./	R.	Fully Insulated		۸Tv	50.00	*R
Daily total solar i	insolation on a horizontal surface Rtu/(ft2 day)	1	1 180 00		· ••• · · · · · · · · · · · · · · · · ·			00.00	· ·
	insolution on a nonzonial sundee, Diur(liz udy)	ť	1,100.00	1	Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)		ΔPv	0.03046	psia
Fully insulated		1		1	Vapor pressure at the average daily max liquid surface terms (Eq. 1-25 or 1-26 using TLY: Pvx = ev.		x PVX	0.06237	psia
Tv = TB		Τv	579.70	*R	Vapor pressure at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PVX = ex Vapor pressure at the average daily min liquid surface temp. (Eq. 1-25 or 1-26 using TLX; PvN = ext		x PVN	0.03191	psia
		İ	Average daily maximum liquid surface temperature. dea R (TLX = TLA + 0.25∆TV from Figure 7.1			598.76	*R		
Liquid Bulk Temperature; Temperature of Heated Product TB 579.70 *R		*R	Average daily	minimum liquid surface temperature, deg R (TLN = TLA - 0.25∆TV from Figure 7.1-1	17 TLN	572.95	*R		
Average daily an	mbient temperature (Equation 1-30)	TAA	584.70		Average daily minimum inquid surface temperature, deg K (TEN = TEA - 0.2021 V from Figure 7.1-17		•	•	•
tank shell solar	absorptance, dimensionless, Table 7.1-6	αs	0.90		Fully Insulated		ΔPv	0.00	psia
daily total solar in	insolation on a horizontal surface, Btu/(ft2 day)	1	1,180.00				•	·	
					(Equation 1-10: ΔP	B = PBP - PBV)	ΔΡΒ	0.06	
					Breather Vent	Setting Range (Default Assumption: +/- 0.03)	PBP	0.03	psi
							PBV	-0.03	psi

8907 в

Total Losses (Eq.1-1: LT = Ls+Lw)

791.39 lb/y

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Table 1							
TANK EMISSION CALCULATION							
(Note - Cells in pink are input cells. All other cells are calculated cells.)							

Tank No.	Tank 30		Tank type	Fixed Roof Tank		Date		07/09/20		
Material stored	Biodiesel		Company	Global	lobal Performed by			Nicole Brower		
City	Albany		State	New York						
Description	Aboveground Storage Tank									
	INPUT DATA	T		Unite		CALCULATIONS	Cumbal		Unite	
			-	Units			Symbol		Units	
		Symbo		Unito	Standing Lossos (a 1 2: 1 a = 265 (\/v * \/v * KE * Ka) //In Heated)	1.0	7 202	lb/ur	
Product Informati	tion	Symbo		Units	Vanor Space	/olume: see Equation 1-3	LS	292095.5	ft3	
Vapor Molecular	ar weight	Mv	120	l h/lh-mole	Stock Vapor D	ensity	Ŵv	0.0009	lh/ft3	
rapor molecular	i noight			25/15 111010	Vapor Space	Expansion Factor (0 < KE <= 1): see Eduation 1-5	KE	0.082157	per dav	
Tank design data	a				Vented Vapor	Saturation Factor	Ks	0.94	NA	
Shell height	•	Hs	45.00		Constant; Nun	ber of Daily Events in a Year	365	365	days/year	
Diameter		D	125.00	ft		•				
Tank volume			3,829,140	gallons	Standing Losses	(Eq.1-4: Ls = 365 KE (Pi/4 * D^2) * Hvo * Ks * Wv (HEATED)	Ls	0.2009	lb/yr	
Turnovers		Ν	101.63		Tank diameter		D	125.00	ft	
Throughput		Q	389,172,536	gal/yr	Stock Vapor D	ensity	Wv	0.0009	lb/ft3	
Roof Type:	Cone or Dome		Cone		Vapor Space F	Expansion Factor (0 < KE <= 1); see Equation 1-5	KE	0.082157	per day	
If Cone:					Vented Vapor	Saturation Factor	Ks	0.06	NA	
Tank cone roof s	slope (If unknown, use 0.0625)	SR	0.0625	ft/ft	Constant; Nun	ber of Daily Events in a Year	365	365	days/year	
If Dome					Vapor Space 0	Jutage; see Equation 1-16	HVO	24		
Tank dome root	radius (if unknown, use tank diameter (D) or (2RS))	RR	125.00	π	Working Loopoo (F	~ 4 25: 1 MD=[//0.042\00c)W()/D]*[4: (NoEc/D)])	1	706 99	llehar	
Tank Color (coo	a Point Tab)	INC	8.00	INA	Appual throug	q.1-55: LWD-[((0.943)QCSWL)/D]"[1+(NCFC/D)])		0.266.012	iD/yi bbl/yr	
Breather Vent Se	Setting Range (Default Assumption: +/- 0.03)	PRP	0.03	nsi	Shell clingage	iput factor: see Table 7 1-10	Q Cs	9,200,015	bbl/yi	
Breather vent of		PBV	-0.03	nsi	Average organ	ic liquid density	WI	7 10	lb/nal	
Shell clingage fa	actor: see Table 7.1-10	Cs	0.0015	bbl/1.000 ft2	Tank diameter		D	125.00	ft	
Average organic	c liquid density	WL	7.10	lb/gal	Constant		0.943	0.94	1.000 ft3*gal/bbl2	
					Number of fixe	d roof support columns	Nc	8.00	NA	
Average Daily Lig	quid Surface Temperature				Effective colur	nn diameter; 1.1, 0.7, or 1.0	Fc	1.10	ft	
Uninsulated FR	RT; see Equation 1-27 simplified to Equation 1-28									
TLA = 0.4*TAA +	+ 0.6*TB + 0.005*α*I	TLA	587.01	*R	Vapor Space Volur	ne (Eq.1-3: Vv = ((Pi / 4) D^2)Hvo	Vv	292,095.51	ft3	
Average daily an	mbient temperature (Equation 1-30)	TAA	584.7	*R	Tank diameter		D	125.00	ft	
Liquid bulk temp	perature (Equation 1-31)	TB	579.7	*R	Vapor Space (Dutage; see Equation 1-16	Hvo	23.80	ft	
Tank paint solar	r absorptance, dimensionless, Table 7.1-6	α	0.9							
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1180.0		Vapor Space Outag	je (Eq. 1-16: Hvo=Hs-HL+HRO	Hvo	23.80	ft	
	Average Daily Liquid Surface Temperature:		127.3	*F	Tank shell hei	yht	Hs	45.00	ft	
					Liquid Height	typically assumed to be at half-full level)	HL	22.50	ft	
Partially Insulat	ated FRT; see Equation 1-29				Roof Outage (for a Cone Roof vs Dome Roof)	HRO	1.30	ft	
1LA = 0.3*1AA +	+ 0.7*1B + 0.005*αR*1	ILA	586.51	*R	Dest Outers Ore	- D6 (E 4 47 9 4 40: 11D0-(4/0)0D+D-)		1.00	4	
Average daily an	implent temperature (Equation 1-30)	TAA	584.7	^R +D	Roof Outage - Con	e Root (Eq. 1-17 & 1-18: HRO=(1/3)SR^Rs)	HRO	1.30	Π	
Liquid bulk temp	perature (Equation 1-31)	1B aB	5/9./	"R	Tank cone roo	r slope (ir unknown, use 0.0625)	SK	0.0625	11/11 #	
Daily total calar	ce solal absorptance, uniferisionless, Table 7.1-6	urk	1 190 00		Tank sheir fau	us	rts	02.50	n	
Dally total solar i	Average Daily Liquid Surface Tomporature:	1	1,160.00	*⊏	Boof Outogo Domo	Boof (Eg. 1 10 8 1 20: HEO-/DB (BBA2 BoA2)A0 E)*(0 E+0 16667//BB (BBA2 BoA2)A0 E)		9 57	#	
	Average Daily Elquid Surface Temperature.		120.0	1	Tank dome ro	fradius (If unknown use tank diameter (D) or (2Rs))	RR	125.00	ft	
Average Daily Am	mbient Temperature: see Equation 1-30				Tank shell rad		Rs	62.50	ft	
TAA = ((TAX+TA	AN/2)	ТАА	584.70	*R	Turik Sheir Tuu		1.0	02.00		
average daily ma	naximum ambient temperature, min tank temperature	TAX	609.70	*R	Vented Vapor Satu	ration Factor (Eq. 1-21: Ks = 1/(1+0.053*PvA*Hvo))	Ks	0.94		
average daily mi	ninimum ambient temperature, max tank temperature	TAN	559.70	*R	Vapor Pressur	e at Avg Daily Lig Surface Temp	PvA	0.0463	psia	
					Vapor Space (Dutage; see Equation 1-16	Hvo	23.80	ft	
Stock Vapor Densi	sity; see Equation 1-22									
Wv = (Mv*PVA)/)/(R*Tv)	Wv	0.0009		Vapor Space Expa	nsion Factor (Eq. 1-5: (ΔTv/TLA)+[(ΔPv-ΔPB)/(PA-PvA)]	KE	0.08	per day	
Vapor Molecular	ar weight	Μv	120		Average Daily	Vapor Temperature Range	∆Tv	50.00	*R	
Constant		R	10.7310		Average Daily	Vapor Pressure Range	ΔPv	0.00	psi	
Equation 1-25 P	PvA = exp(A-(B/TLA))	PvA	0.0463		Breather Vent	Pressure Setting Range	ΔΡΒ	0.06	psi	
Average Daily Li	iquid Surrace Temperature	Τv	579.7000		Vapor Pressur	e at Avg Daily Liq Surface Temp	PvA	0.0463	psia	
					Average Daily	Liquid Surface Temperature	ILA	579.70	*R	
Average vapor 16	emperature		-		Autiospheric P	lessure	ΓA	14.70	psia	
Uninsulated FR	A 1; see Equation 1-32 simplified to Equation 1-33	Tu	500 70	*D	Equation 1.6 aimm	lified to Equation 4.7 for Uninculated Tanks (ATV = 0.7 ATA + 0.02 c V	ATV	50.04		
Average daily an	mbient temperature (Equation 1-30)	TAA	592.76	*P	Equation 1-6, simp	ambient temperature range		56.24	*D	
Liquid bulk tomp	porature (Equation 1.21)	TD	570.7	*D	Average daily	ambient temperature range	a	50.0	IX	
Tank paint solar	r absorptance, dimensionless, Table 7 1-6	a	0.9	R.	daily total sola	r insolation on a horizontal surface. Btu/(ff2 day)	u I	1180.00		
Daily total solar i	insolation on a horizontal surface. Btu/(ft2 day)	u I	1180.0		daily total sola	insolation on a nonzontal surface, bits (nz day)	ľ	1180.00		
Dully total Solar I	insolution on a nonzontal surface; bita(itz day)		1100.0		Partially Insulated	I - Equation 1-8 (ΔTV = 0.6 ΔTA + 0.02 αR I)	ΔΤν	372.06	*R	
Partially Insulat	ated FRT; see Equation 1-34	1	<u> </u>	1	Average daily	ambient temperature range	ΔTA	584,70	*R	
Tv = 0.6*TAA + 0	0.4*TB + 0.01*αR*I	Tv	593.32	*R	Tank roof surfa	ace solar absorptance, dimensionless, Table 7.1-6	αR	0.90	1	
Average daily an	mbient temperature (Equation 1-30)	TAA	584.7	*R	Average daily	total solar insolation factor, Btu/(ft2 day); Table 7.1-7	1	1180.00		
Liquid bulk temp	perature (Equation 1-31)	ТВ	579.7	*R						
Tank roof surfac	ce solar absorptance, dimensionless, Table 7.1-6	αR	0.90		Fully Insulated		ΔTv	50.00	*R	
Daily total solar i	insolation on a horizontal surface, Btu/(ft2 day)	I	1,180.00							
					Average Daily Vapor Pressure Range for Uninsulated Tanks (Equation 1-9: ΔPV = PVX - PVN)		ΔPv	0.03046	psia	
Fully Insulated					Vapor pressure at the average daily max liquid surface temp, (Eq. 1-25 or 1-26 using TLX; Pvx = ex		PVX	0.06237	psia	
Tv = TB		Τv	579.70	*R	Vapor pressure at the average daily min liquid surface temp, (Eq. 1-25 or 1-26 using TLX; PvN = ex		PVN	0.03191	psia	
		TO		10	Average daily maximum liquid surface temperature, deg R (TLX = TLA + 0.25ΔTV from Figure 7.1-1		TLX	598.76	*R	
Liquid Bulk Tem	nperature; Temperature of Heated Product	TB	579.70	*K	Average daily minimum liquid surface temperature, deg R (TLN = TLA - 0.25∆TV from Figure 7.1-17		TLN	572.95	۲R	
Average daily an	Implent temperature (Equation 1-30)	IAA	584.70		Fully in 14.1		ADV		la ata	
tarik sheli solar	ausorptance, dimensionless, Table 7.1-6	as	0.90		Fully insulated			0.00	psia	
ually lotal solar l	insolation on a nonzontal sunace, Btu/(Itz day)	P.	1,180.00		(Equation 4.40: AD		APR	0.00		
					Reathor Vent	Setting Pange (Default Assumption: +/_0.02)	PBP	0.06	nei	
					breather vent	Setting range (Delauit Assumption: +/- 0.03)		0.03	poi poi	
					1		гDV	-0.03	hai	

8907 в

Total Losses (Eq.1-1: LT = Ls+Lw)

797.08 lb/y

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Table 4 API Document Table 7 Meteorological Data fo

			Annual Average	
Number	Location	T_{ax} (°F)	T_{an} (°F)	I (Btu/ft ² day)
1	Providence, RI	59.3	41.2	1112
2	Providence, RI	59.3	41.2	1112
3	Savannah, GA	76.7	55.1	1365
4	Indianapolis, IN	62	42.2	1165
5	Chicago, IL	58.7	39.7	1215
6	Chicago, IL	58.7	39.7	1215
7	Indianapolis, IN	62	42.2	1165
8	Providence, RI	59.3	41.2	1112
9	Providence, RI	59.3	41.2	1112
10	Detroit, MI	58.2	38.9	1120
11	Detroit, MI	58.2	38.9	1120
12	Detroit, MI	58.2	38.9	1120
13	Detroit, MI	58.2	38.9	1120
14	Albany, NY	57.4	39.6	1180
15	Newark, NJ	63.38	46.1	1235.58
16	Newark, NJ	62.5	45.9	1165
17	Buffalo, NY	55.8	39.3	1034
18	Buffalo, NY	55.8	39.3	1034
19	New York, NY	61	47.5	1171
20	New York, NY	61	47.5	1171
21	New York, NY	61	47.5	1171
22	Buffalo, NY	55.8	39.3	1034
23	Buffalo, NY	55.8	39.3	1034
24	Buffalo, NY	55.8	39.3	1034
25	Buffalo, NY	55.8	39.3	1034
26	Buffalo, NY	55.8	39.3	1034
27	Buffalo, NY	55.8	39.3	1034
28	Buffalo, NY	55.8	39.3	1034
29	Philadelphia, PA	63.4	45.1	1169
30	Philadelphia, PA	63.4	45.1	1169
31	Pittsburgh, PA	59.9	40.7	1069
32	Philadelphia, PA	63.4	45.1	1169
33	Philadelphia, PA	63.4	45.1	1169
34	Pittsburgh, PA	59.9	40.7	1069
35	Philadelphia, PA	63.4	45.1	1169
36	Allentown, PA	60.8	41.2	1138
37	Pittsburgh, PA	59.9	40.7	1069
38	Allentown, PA	60.8	41.2	1138
39	Cleveland, OH	58.5	40.7	1091
40	Columbus, OH	61.5	41.8	1123
41	Cleveland, OH	58.5	40.7	1091
42	Toledo, OH	58.8	38.3	1133
43	Roanoke, VA	66.5	45	1342
44	Louisville, KY	66.025	46.033	1305.037
45	Detroit, MI	58.2	38.9	1120

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 Table 3

 Solar Absorptance (α) for Selected Paints

 Determining Product Evaporation Losses from Tank Turnovers

 API Document Table 7.1-6

		Paint Factors (α)				
Paint No.	Paint Color	Paint Shade	Good/New	Average	Poor/Aged	
0	White	N/A	0.17	0.25	0.34	
1	Aluminum	Specular	0.39	0.44	0.49	
2	Aluminum	Diffuse	0.60	0.64	0.68	
3	Beige / Crean	N/A	0.35	0.42	0.49	
4	Black	N/A	0.97	0.97	0.97	
5	Brown	N/A	0.58	0.62	0.67	
6	Gray	Light	0.54	0.58	0.63	
7	Gray	Medium	0.68	0.71	0.74	
8	Green	Dark	0.89	0.90	0.91	
9	Red	Primer	0.89	0.90	0.91	
10	Rust	Red Iron Oxide	0.38	0.44	0.50	
11	Tan	N/A	0.43	0.49	0.55	
12	Aluminum	Mill Finish	0.10	0.12	0.15	

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PART 212 REVIEW AIR DISPERSION MODEL PROTOCOL ALBANY, NY

March 2020

Prepared for:

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Prepared by:



349 Northern Blvd, Suite 3 Albany, NY 12204

Envirospec Engineering Project E19-2196

1.0 Introduction:

Air dispersion modeling will be conducted for the Global Companies LLC (Global) Albany Terminal (Terminal) located in Albany, NY. This facility is classified as a gasoline and distillate loading terminal. It consists of ten (10) permitted gasoline storage tanks and five (5) distillate tanks. The facility has one (1) truck loading rack, one (1) rail loading rack, and a marine loading dock. The truck loading rack is controlled by a Vapor Recovery Unit (VRUTK), rail loading is controlled by a Vapor Combustion Unit (VCURR), and marine loading is controlled by two VCUs (VCUM1 and VCUM2).

This protocol is being submitted as part of a Title V air permit modification application for the facility. Air dispersion modeling is required to determine compliance with 6 NYCRR Part 212. 6 NYCRR Part 212 regulates air pollution from process operations, as defined in the regulation. Each contaminant is assigned an Environmental Rating, which is used to determine the degree of air pollution control required. Facilities with process operations subject to New Source Performance Standards (NSPS) (40 CFR Part 60) and National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 63) are considered in compliance with Part 212 with the exception of compounds on the high toxicity air contaminant (HTAC) list. Facility Potential to Emit (PTE) calculations are completed to determine maximum potential emissions of Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs). Pollutants that are considered HTACs are then compared to the mass emission limits specified on 212-2.2 Table 2 – High Toxicity Air Contaminant List. HTACs that exceed the mass emission limit are modeled to demonstrate that fence-line concentrations are below Annual Guideline Concentrations (AGC) for annual emission rates and Short-Term Guideline Concentrations (SGC) for hourly emission rates for the applicable contaminant. HTACs that are below SGC/AGC limits are in compliance with Part 212. The only HTAC emitted from process operations at this facility with emissions exceeding the specified mass emission limit is benzene. Other HAPs are emitted from facility operations, but they are not considered HTACs per 212-2.2 Table 2. Air dispersion modeling will be conducted to assess whether or not facility benzene emissions exceed the SGC and AGC levels.

The air dispersion model will be completed using BREEZE AERMOD Software (version 8.1). Emissions information can be found below which provides information on variables and modeling assumptions which will be used when developing the model. This information is also presented in the attached modeling summary.

2.0 Facility Overview and Process Description:

Global's Albany Terminal is located at 50 Church Street in Albany, NY. The facility is permitted for petroleum product loading operations. The facility has an overall refined product (gasoline, ethanol, blendstock, distillate, and biodiesel) throughput limit of 1,929,000,000 gallons with subcaps at each rack. There is an additional 450,000,000 gallon throughput for crude oil at the marine dock.



3.0 Modeling Methodology:

The projection to be used for the model will be UTM WGS84, zone 18. An aerial image of the site as well as a facility site plan will be imported as base maps and will be used to determine source locations. The modeling methodology used for this analysis is described below. The following subsections describe the details of the modeling analysis.

3.1 Selection of Dispersion Model:

The latest version of the American Meteorological Society/Environmental Protection Agency Regulatory Model AERMOD will be used. All standard regulatory default options of AERMOD will be invoked.

To facilitate the implementation of AERMOD, the BREEZE AERMOD software will be used.

3.2 Site Characterization:

The Albany Terminal is located at 50 Church Street in Albany, NY on the western bank of the Hudson River. The base elevation for the terminal is approximately 18 ft. Based on a land use analysis of the area surrounding the terminal, the surrounding area will be considered urban in the air dispersion model with a population of 107,000 based on the total population of the cities of Albany and Rensselaer (2010 census).

3.3 Source Emissions:

Total benzene emissions from the facility's PTE calculations will be used for modeling. The PTE calculations will be performed using the latest AP-42 methodology (November 2019). Tank emissions (standing and working) were calculated using the 2019 AP-42 formulas (AP-42 [7.1 Organic Liquid Storage Tanks]). Tank landing and cleaning emissions were also calculated using the 2019 AP-42 calculation methods (AP-42 [7.1.3.3 Floating Roof Landing Losses]). Two (2) tanks will be heated for biodiesel storage. Emissions were calculated as heated tanks per AP-42 (7.1 Organic Liquid Storage Tanks).

Transfer emissions are calculated using the standard AP-42 method for calculating rack transfers using maximum facility throughput values and design efficiency of the control device. Transfer fugitives utilize a standard 99.2% capture efficiency factor when loading (AP-42 [5.2 Transportation and Marketing of Petroleum Liquids]).

Liquid weight concentrations for benzene were based on product data from Global and used to calculate the benzene vapor weight concentration for gasoline and distillate. Based on these calculations, gasoline has a benzene vapor weight concentration of 0.41% and distillate has a benzene vapor weight concentration of 0.41% and distillate has a benzene vapor weight concentration of 0.22%. Gasoline has been used as a worst-case product for gas, ethanol and crude oil as it has the highest or equal benzene concentration. The distillate benzene vapor weight concentration of 0.22% is used for the emission calculations for the fixed roof tanks. The blendstock benzene vapor weight concentration of 0.46% are used for blendstocks.



3.3.1 Gasoline Storage Tanks:

The facility currently has ten (10) gasoline storage tanks. The tanks are equipped with internal floating roofs and have varying capacities. Each tank will be modeled as an area source with actual tank height as the release height and actual tank dimensions will be used to determine surface area.

To determine the landing scenario that causes the worst-case short-term (1-hour) impact, landing emissions will be evaluated for each tank separately in the short-term model. The tank with the worst-case estimate of emissions during landing will then be used to determine the maximum hourly emission rate of benzene. Runs will also be completed assuming that the worst two tank landings are occurring simultaneously. Cleanings will also be modeled with vapor purge loss having the highest hourly emissions.

3.3.2 Distillate Storage Tanks:

The facility currently has five (5) vertical fixed roof (VFR) distillate storage tanks with two (2) of those being heated. Each tank will be modeled as an area source with actual tank height as the release height and actual tank dimensions will be used to determine surface area.

3.3.3 Truck Loading Rack:

The facility has one (1) truck loading rack where gasoline, ethanol, and distillate are loaded. The truck rack has a refined product throughput subcap of 880,000,000 gallons per year. Loading operations are controlled with a VRU. The permitted emissions limit will be 2 mg/L. The PTE calculation for the loading rack assumed maximum annual throughput of 880,000,000 gallons, controlled by the VRU. Loading rack fugitive emissions will be controlled using a vac assist. Under an alternate operating scenario (AOS), loading can occur up to a lower throughput with fugitive emissions. Loading rack fugitive emissions will be modeled as a volume source and controlled rack loading emissions will be modeled as a point source. Manufacturer information will be used to develop source parameters such as stack height, stack diameter, stack temperature, and stack velocity. For the short term dispersion model, the truck loading rack will be assumed to load gasoline at the maximum loading rate as this is the worst case scenario product. Modeling will be conducted for the primary and alternate operating scenarios.

3.3.4 Rail Loading:

The facility has one (1) rail loading area where gasoline, ethanol, distillate, and biodiesel are loaded. The rail rack has a refined product throughput subcap of 300,000,000 gallons. Loading operations are controlled with a VCU. The permitted emissions limit will be 2 mg/L. The PTE calculation for the loading rack assumed maximum annual throughput for each product loaded, controlled by the VCU. The controlled loading emissions will be modeled as a point source. Rail loading fugitive emissions will be controlled using a vac assist. Under an AOS, loading can occur up to a lower throughput with fugitive emissions. Manufacturer information will be used to develop source parameters such as stack height, stack diameter, stack temperature, and stack velocity. For the short term dispersion model, the rail loading will be assumed to load gasoline at the maximum loading rate as this is the worst case scenario product. Modeling will be conducted for the primary and alternate operating scenarios.



3.3.5 Marine Loading:

The facility has one (1) marine loading rack where refined products (gasoline, ethanol, blendstock, distillate, and biodiesel) and crude oil are loaded. The marine dock has a refined product subcap throughput of 900,000,000 gallons and a crude throughput cap of 450,000,000 gallons. Loading operations are controlled by two VCUs. The PTE calculation for the loading rack assumed maximum annual throughput for each product loaded, controlled by two VCUs (VCUM1 at 10 mg/L and VCUM2 at 2 mg/L). Marine loading fugitive emissions will be controlled under an AOS only for inerted vessels. Loading can occur up to a lower throughput with fugitive emissions. Fugitive emissions will be modeled as an elevated area source and controlled rack landing emissions will be modeled as a point source. Manufacturer information will be used to develop source parameters such as stack height, stack diameter, stack temperature, and stack velocity. For the short term dispersion model, the marine loading will be assumed to load gasoline at the maximum loading rack as this is the worst case scenario product. Modeling will be conducted for the primary and alternate operating scenarios.

3.4 Building Downwash Analysis:

All of the storage tanks at the facility, as well as office buildings, will be utilized in the building downwash analysis. Direction-specific building dimensions will be generated using BPIP-PRIME.

3.5 Meteorological Data:

Meteorological data which has been pre-processed for AERMOD for the years 2014-2018 will be obtained from the New York State Department of Environmental Conservation. Surface Met Data and Upper Air Met Data is from the Station located at the Albany International Airport in Colonie, NY located approximately 8 miles northwest of the terminal. This station was chosen because of its close proximity to the terminal.

3.6 Modeled Receptors

Boundary receptors will be modeled at the property lines from the facility site plan. Receptors will be located every 25 meters along the facility boundaries. A Cartesian receptor grid will be used to monitor the area surrounding the facility, using the following spacing:

- 70 meter spacing from the facility boundary out to 1 km
- 100 meter spacing from 1 to 2 km
- 250 meter spacing from 2 to 5 km

Given the low emission release heights and the near ambient release temperatures it is not anticipated that significant emissions will be carried beyond these receptor points.

3.7 Terrain Considerations

The effects of terrain were considered in the modeling analysis. Elevations (above mean sea level) corresponding to the base elevation of the facility will be assigned to all sources and buildings at the facility, as well as the modeled receptors.



The terrain processor for AERMOD, AERMAP Version 19191 will be used to generate terrain maxima (also referred to as hill heights) for the sources, buildings, and receptors. To generate these terrain maxima, object locations and Digital Elevation Model (DEM) data in 1 degree format will be input to AERMAP.

4.0 Model Results

The results of this analysis will be clearly summarized in tables that will consist of the following information:

- Predicted concentrations, and
- Comparison to the appropriate standards.

In addition to the tabulated results, maps of concentration isopleths will be presented to further illustrate the results.

Hard copies of the model output files for the controlling year for 1-hour and annual benzene concentrations will be submitted. In addition, a .zip folder will be provided which will contain all pertinent input and output files, as well as the meteorological data files.



Global Albany Annual Model Assumptions

General Parameters						
Parameter		Value				
Projection		UTM				
Datum		WGS84				
UTM Zone		18				
Hemisphere		Northern				
AERMET		2014-2018 MET Data				
AERMAP		1-deg DEM Data from webgis.com				
Sources	Assumptions/ Notes	Value				
Truck Rack VRU (VRUTK) (Point Sour	ce)					
Emission Rate (lb/hr)	From PTE Calculations	6.87E-03				
Emission Rate (lb/hr) Alternate						
Operating Scenario	From PTE Calculations	1.37E-03				
Stack Height (ft)	Actual Stack Height	22.4				
Stack Temperature	Release Temperature	Ambient				
Stack Velocity (m/s)	Assumed	0.003				
Stack Diameter (ft)	Actual Stack Diameter	1				
Emissions Limit (mg/L)		2				
Rail VCU (VCURR) (Point Source)	•	•				
Emission Rate (lb/hr)	From PTE Calculations	2.34E-03				
Emission Rate (lb/hr) Alternate						
Operating Scenario	From PTE Calculations	4.69E-04				
Stack Height (ft)	Actual Stack Height	35				
Stack Temperature	Release Temperature	1350				
Stack Velocity (ft/s)	Assumed	50				
Stack Diameter (ft)	Actual Stack Diameter	8				
Emissions Limit (mg/L)		2				
Marine VCU (VCUM1) (Point Source)						
Emission Rate (lb/hr) (if all						
throughput to VCUM1)	From PTE Calculations	0.053				
Emission Rate (lb/hr) (if all						
throughput to VCUM1) Alternate						
Operating Scenario	From PTE Calculations	0.055				
Stack Height (ft)	Actual Stack Height	35				
Stack Temperature	Release Temperature	1500				
Stack Velocity (ft/s)	Assumed	50				
Stack Diameter (ft)	Actual Stack Diameter	6				
Emissions Limit (mg/L)		10				
Marine VCU (VCUM2) (Point Source)						
Emission Rate (lb/hr) (if all						
throughput to VCUM2)	From PTE Calculations	0.0105				
Emission Rate (lb/hr) (if all						
throughput to VCUM2) Alternate						
Operating Scenario	From PTE Calculations	0.0109				
Stack Height (ft)	Actual Stack Height	60				
Stack Temperature	Release Temperature	1500				
Stack Velocity (ft/s)	Assumed	50				
Stack Diameter (ft)	Actual Stack Diameter	10				
Emissions Limit (mg/L)		2				
Truck Fugitives (Volume Source) (Alt	ernate Operating Scenario Only)					
Emission Rate (lb/hr)	From PTE Calculations	5.50E-03				
Release Height (ft)	Center of Plume	10				
Initial Horizontal Dimension (ft)	Length of Side divided by 4.3	31.4				

Barge Fugitives (Area Source) (Alternate Operating Scenario Only) Emission Rate (lb/hr/ft ²) From PTE Calculations 1.88E-07 Release Height (ft) Barge Height 20 Initial Vertical Dimension (ft) Barge height divided by 2.15 9.3 Area (ft ²) Barge Area 9178.8 Rail Fugitives (Volume Source) (Alternate Operating Scenario Only) 1.87E-02	
Emission Rate (lb/hr/ft²)From PTE Calculations1.88E-07Release Height (ft)Barge Height20Initial Vertical Dimension (ft)Barge height divided by 2.159.3Area (ft²)Barge Area9178.8Rail Fugitives (Volume Source) (Alternate Operating Scenario Only)Emission Bate (lb/hr)Erom PTE Calculations1.87E-02	
Release Height (ft) Barge Height 20 Initial Vertical Dimension (ft) Barge height divided by 2.15 9.3 Area (ft ²) Barge Area 9178.8 Rail Fugitives (Volume Source) (Alternate Operating Scenario Only) 1 875-02	
Initial Vertical Dimension (ft)Barge height divided by 2.159.3Area (ft²)Barge Area9178.8Rail Fugitives (Volume Source) (Alternate Operating Scenario Only)Emission Bate (lb/br)From PTE Calculations1 875-03	
Area (ft ²) Barge Area 9178.8 Rail Fugitives (Volume Source) (Alternate Operating Scenario Only) 1 875-03	ļ
Rail Fugitives (Volume Source) (Alternate Operating Scenario Only) Emission Bate (lb/br) From PTE Calculations 1 875-03	
Emission Rate (lb/br) From PTE Calculations 1 875-02	
Release Height (ft) Release Height 17	
Initial Horizontal Dimension (ft) Length of Side divided by 4.3 54.88	
Initial Vertical Dimension (ft)Center of Plume height divided by 2.157.91	
Tank 28 (Distillate) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 1.67E-08	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft)Tank Radius62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 29 (Distillate) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 1.67E-08	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft) Tank Radius 62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 30 (Distillate) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 1.67E-08	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft) Tank Radius 62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 33 (Distillate) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 1.67E-08	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft) Tank Radius 62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 64 (Distillate) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 1.67E-08	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft) Tank Radius 62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 31 (Gasoline) (Area Source)	
Emission Rate (lb/hr/ft ²) From PTE Calculations 4.28E-07	
Release Height (ft) Tank height. Approx. height of roof vents 45	
Radius (ft) Tank Radius 62.5	
Initial Vertical Dimension (ft) Tank height divided by 2.15 20.93	
Area (ft ²) Tank Area 12271.85	
Tank 32 (Gasoline) (Area Source)	
Emission Pate (lb/br/ft ²) Erom PTE Calculations 4,295,07	
Release Height (ft)Tank height. Approx. height of roof vents4.28E-07	
Release Height (ft)Tank height. Approx. height of roof vents4.28E-07Radius (ft)Tank Radius62.5	

Area (ft ²)	Tank Area	12271.85		
Tank 39 (Gasoline) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	3.26E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	45		
Radius (ft)	Tank Radius	62.5		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93		
Area (ft ²)	Tank Area	12271.85		
Tank 120 (Gasoline) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	5.90E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	40		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	5026.55		
Tank 114 (Blendstock) (Area Source)	•	-		
Emission Rate (lb/hr/ft ²)	From PTE Calculations	3.73E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	60		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	11309.73		
Tank 115 (Blendstock) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	3.42E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	75		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	17671.46		
Tank 117 (Blendstock) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	3.24E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	55		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	9503.32		
Tank 118 (Blendstock) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	6.83E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	50		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	7853.98		
Tank 119 (Blendstock) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	1.07E-06		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	40		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft ²)	Tank Area	5026.55		
Tank 121 (Blendstock) (Area Source)				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	5.62E-07		
Release Height (ft)	Tank height. Approx. height of roof vents	48		
Radius (ft)	Tank Radius	75		
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33		
Area (ft²)	Tank Area	17671.46		

Global Albany Hourly Model Assumptions

General Parameters					
Parameter		Value			
Projection		UTM			
Datum		WGS84			
UTM Zone		18			
Hemisphere		Northern			
AERMET		2014-2018 MET Data			
AERMAP		1-deg DEM Data from webgis.com			
Sources	Assumptions/ Notes	Value			
Truck Rack VRU (VRUTK) (Point Sour	ce)				
Emission Rate (lb/hr)	From PTE Calculations	1.64E-02			
Stack Height (ft)	Actual Stack Height	22.4			
Stack Temperature	Release Temperature	Ambient			
Stack Velocity (m/s)	Assumed	0.003			
Stack Diameter (ft)	Actual Stack Diameter	1			
Emissions Limit (mg/L)		2			
Rail VCU (VCURR) (Point Source)					
Emission Rate (lb/hr)	From PTE Calculations	1.85E-02			
Stack Height (ft)	Actual Stack Height	35			
Stack Temperature	Release Temperature	1350			
Stack Velocity (ft/s)	Assumed	50			
Stack Diameter (ft)	Actual Stack Diameter	8			
Emissions Limit (mg/L)		2			
Marine VCU (VCUM1) (Point Source)					
Emission Rate (lb/hr) (if all					
throughput to VCUM1)	From PTE Calculations	0.057			
Emission Rate (lb/hr) (if all					
throughput to VCUM1) Alternate					
Operating Scenario	From PTE Calculations	0.060			
Stack Height (ft)	Actual Stack Height	35			
Stack Temperature	Release Temperature	1500			
Stack Velocity (ft/s)	Assumed	50			
Stack Diameter (ft)	Actual Stack Diameter	6			
Emissions Limit (mg/L)		10			
Marine VCU (VCUM2) (Point Source)					
Emission Rate (lb/hr) (if all					
throughput to VCUM2)	From PTE Calculations	0.07			
Emission Rate (lb/hr) (if all					
throughput to VCUM2) Alternate					
Operating Scenario	From PTE Calculations	0.08			
Stack Height (ft)	Actual Stack Height	60			
Stack Temperature	Release Temperature	1500			
Stack Velocity (ft/s)	Assumed	50			
Stack Diameter (ft)	Actual Stack Diameter	10			
Emissions Limit (mg/L)		2			
Truck Fugitives (Volume Source) (Alternate Operating Scenario Only)					
Emission Rate (lb/hr)	From PTE Calculations	6.57E-02			
Release Height (ft)	Center of Plume	10			
Initial Horizontal Dimension (ft)	Length of Side divided by 4.3	31.4			
Initial Vertical Dimension (ft)	Center of Plume height divided by 2.15	4.65			
Barge Fugitives (Area Source) (Alternate Operating Scenario Only)					
Emission Rate (lb/hr/ft ²)	From PTE Calculations	1.96E-06			
Release Height (ft)	Barge Height	20			

Initial Vertical Dimension (ft)	Barge height divided by 2.15	9.3			
Area (ft ²)	Barge Area	9178.8			
Rail Fugitives (Volume Source) (Alternate Operating Scenario Only)					
Emission Rate (lb/hr)	From PTE Calculations	7.39E-02			
Release Height (ft)	Release Height	17			
Initial Horizontal Dimension (ft)	Length of Side divided by 4.3	54.88			
Initial Vertical Dimension (ft)	Center of Plume height divided by 2.15	7.91			
Tank 28 (Distillate) (Area Source)					
Emission Rate (lb/hr/ft ²)	From PTE Calculations	1.67E-08			
Release Height (ft)	Tank height. Approx. height of roof vents	45			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
Area (ft ²)	Tank Area	12271.85			
Tank 29 (Distillate) (Area Source)	•				
Emission Rate (lb/hr/ft ²)	From PTE Calculations	1.67E-08			
Release Height (ft)	Tank height. Approx. height of roof vents	45			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
Area (ft ²)	Tank Area	12271.85			
Tank 30 (Distillate) (Area Source)					
Emission Rate (lb/hr/ft ²)	From PTE Calculations	1.67F-08			
Release Height (ft)	Tank height. Approx. height of roof vents	45			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
Area (ft ²)	Tank Area	12271.85			
Tank 33 (Distillate) (Area Source)					
Emission Bate $(lb/br/ft^2)$	From PTE Calculations	1.67E-08			
Release Height (ft)	Tank height Annrox height of roof vents	1.071-08			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2 15	20.93			
$\frac{1}{\sqrt{r}}$	Tank Area	12271 85			
Tank 64 (Distillate) (Area Source)		12271.05			
Emission Pate ($lb/br/ft^2$)	From PTE Calculations	1.675.08			
Release Height (ft)	Tank height Annrox height of roof vents	1.072-08			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
$\Delta rea (ft^2)$	Tank Area	12271.85			
Tank 31 (Gasoline) (Area Source)		12271.05			
Emission Pate (lb/br/ft ²) Not During					
Landing	From PTF Calculations	/ 28E-07			
Emission Pate (lb/br/ft ²) During		4.202 07			
Landing	From DTE Calculations	6 625 04			
Release Height (ft)	Tank height Annrox height of roof vents	0.022-04			
Radius (ft)	Tank Radius	62.5			
Initial Vertical Dimension (ft)	Tank height divided by 2 15	20.93			
$\Delta reg (ft^2)$	Tank Area	12271.85			
Tank 32 (Gasoline) (Area Source)		12271.85			
Emission Pate (lb/br/ft ²) Not During					
	From PTE Calculations	4 285-07			
Emission Date (lb/bs/ft ²) During		4.201-07			
Landing	From DTE Calculations	6 635 04			
Release Height (ft)	Tank height Approx height of roof vorte	0.02E-04			
neiease meigilt (IL)	rank neight. Approx. neight of roof vents	40			
Radius (ft)	Tank Radius	62.5			
---	---	----------			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
Area (ft ²)	Tank Area	12271.85			
Tank 39 (Gasoline) (Area Source)					
Emission Rate (lb/hr/ft ²) Not During					
Landing	From PTF Calculations	3.26F-07			
Emission Rate (lb/br/ft ²) During					
Landing	From PTE Calculations	2 165-03			
Release Height (ft)	Tank height Annrox height of roof vents	45			
Radius (ft)	Tank Radius	62 5			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	20.93			
(t)	Tank Aroa	12271.85			
Tank 120 (Gasoline) (Area Source)		12271.85			
Emission Pote $(lb/br/ft^2)$ Not During					
Landing	From DTE Coloulations	F 00F 07			
Lanuing		5.90E-07			
Emission Rate (Ib/nr/ft) During		1.115.00			
Landing	From PTE Calculations	1.44E-03			
Release Height (ft)	Tank height. Approx. height of roof vents	48			
Radius (ft)	Tank Radius	40			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33			
Area (ft ²)	Tank Area	5026.55			
Tank 114 (Blendstock) (Area Source)					
Emission Rate (lb/hr/ft ²) Not During					
Landing	From PTE Calculations	3.73E-07			
Emission Rate (lb/hr/ft ²) During					
Landing	From PTE Calculations	8.09E-04			
Release Height (ft)	Tank height. Approx. height of roof vents	48			
Radius (ft)	Tank Radius	60			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33			
Area (ft ²)	Tank Area	11309.73			
Tank 115 (Blendstock) (Area Source)					
Emission Rate (lb/hr/ft ²) Not During					
Landing	From PTE Calculations	3.42E-07			
Emission Rate (lb/hr/ft ²) During					
Landing	From PTE Calculations	1.62E-03			
Release Height (ft)	Tank height. Approx. height of roof vents	48			
Radius (ft)	Tank Radius	75			
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33			
Area (ft ²)	Tank Area	17671.46			
Tank 117 (Blendstock) (Area Source)					
Emission Rate (lb/hr/ft ²) Not During					
Landing	From PTE Calculations	3.24F-07			
Emission Bate (lb/br/ft ²) During					
Landing	From PTE Calculations	1.625-03			
Release Height (ft)	Tank height Annrox height of roof vents	1.022-05			
Radius (ft)	Tank Radius	55			
Initial Vertical Dimension (ft)	Tank height divided by 2 15	22 33			
$\Delta reg (ft^2)$	Tank Area	0502.22			
Tank 118 (Blandstock) (Area Source)		9303.32			
Emission Data (Ib/bs/ft ²) Nat During					
Landing		C 035 07			
Landing	From PTE Calculations	b.83E-07			

Emission Rate (lb/hr/ft ²) During		
Landing	From PTE Calculations	1.33E-03
Release Height (ft)	Tank height. Approx. height of roof vents	48
Radius (ft)	Tank Radius	50
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33
Area (ft ²)	Tank Area	7853.98
Tank 119 (Blendstock) (Area Source)		
Emission Rate (lb/hr/ft ²) Not During		
Landing	From PTE Calculations	1.07E-06
Emission Rate (lb/hr/ft ²) During		
Landing	From PTE Calculations	1.62E-03
Release Height (ft)	Tank height. Approx. height of roof vents	48
Radius (ft)	Tank Radius	40
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33
Area (ft ²)	Tank Area	5026.55
Tank 121 (Blendstock) (Area Source)		
Emission Rate (lb/hr/ft ²) Not During		
Landing	From PTE Calculations	5.62E-07
Emission Rate (lb/hr/ft ²) During		
Landing	From PTE Calculations	1.62E-03
Release Height (ft)	Tank height. Approx. height of roof vents	48
Radius (ft)	Tank Radius	75
Initial Vertical Dimension (ft)	Tank height divided by 2.15	22.33
Area (ft ²)	Tank Area	17671.46



Full Environmental Assessment Form Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Asting on Decision		
Name of Action of Project.		
Project Location (describe, and attach a general location map):		
Brief Description of Proposed Action (include purpose or need):		
Name of Applicant/Sponsor:	Telephone:	
	E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Project Contact (if not same as sponsor; give name and title/role):	Telephone:	
	E Moil:	
	E-Iviali.	
Address:		
City/DO:	State:	Zin Cada:
City/PO.	State.	Zip Code.
Property Owner (if not same as sponsor):	Telephone:	
	F-Mail [.]	
	E Within.	
Address:		
City/PO:	State:	Zip Code:
		1

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship.	("Funding"	'includes grants,	loans, ta	1x relief, a	and any o	other forms	of financial
assistance.)							

Government Entity	If Yes: Identify Agency and Approval(s)	Application Date
	Required	(Actual or projected)
a. City Counsel, Town Board, □ Yes □ No		
or village Board of Trustees		
b. City, Town or Village □ Yes □ No Planning Board or Commission		
c. City, Town or □ Yes □ No Village Zoning Board of Appeals		
d. Other local agencies \Box Yes \Box No		
e. County agencies □ Yes □ No		
f. Regional agencies		
g. State agencies □ Yes □ No		
h. Federal agencies □ Yes □ No		
i. Coastal Resources. <i>i</i> . Is the project site within a Coastal Area	, or the waterfront area of a Designated Inland W	aterway? □ Yes □ No
<i>ii.</i> Is the project site located in a commun <i>iii.</i> Is the project site within a Coastal Eros	ty with an approved Local Waterfront Revitalizat on Hazard Area?	ion Program? \Box Yes \Box No \Box Yes \Box No

C. Planning and Zoning

C.1. Planning and zoning actions.	
 Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? If Yes, complete sections C, F and G. If No, proceed to question C.2 and complete all remaining sections and questions in Part 1 	□ Yes □ No
C.2. Adopted land use plans.	
a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located?	□ Yes □ No
If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located?	□ Yes □ No
 b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) 	□ Yes □ No
If Yes, identify the plan(s):	
c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan?If Yes, identify the plan(s):	□ Yes □ No

C.3. Zoning	
a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. If Yes, what is the zoning classification(s) including any applicable overlay district?	□ Yes □ No
b. Is the use permitted or allowed by a special or conditional use permit?	□ Yes □ No
c. Is a zoning change requested as part of the proposed action?If Yes,<i>i</i>. What is the proposed new zoning for the site?	□ Yes □ No
C.4. Existing community services.	
a. In what school district is the project site located?	
b. What police or other public protection forces serve the project site?	
c. Which fire protection and emergency medical services serve the project site?	
d. What parks serve the project site?	
D. Project Details	
D.1. Proposed and Potential Development	
a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if n components)?	nixed, include all

b. a. Total acreage of the site of the proposed action?	acres
b. Total acreage to be physically disturbed?	acres
c. Total acreage (project site and any contiguous properties) owned	
or controlled by the applicant or project sponsor?	acres
c. Is the proposed action an expansion of an existing project or use?	\Box Yes \Box No
<i>i</i> . If Yes, what is the approximate percentage of the proposed expansion an square feet)? % Units:	d identify the units (e.g., acres, miles, housing units,
d. Is the proposed action a subdivision, or does it include a subdivision?	\Box Yes \Box No
If Yes,	
<i>i</i> . Purpose or type of subdivision? (e.g., residential, industrial, commercial;	if mixed, specify types)
<i>ii.</i> Is a cluster/conservation layout proposed?	\Box Yes \Box No
<i>iii.</i> Number of lots proposed?	
<i>iv.</i> Minimum and maximum proposed lot sizes? Minimum M	laximum
e. Will the proposed action be constructed in multiple phases?	\Box Yes \Box No
<i>i</i> . If No, anticipated period of construction:	months
ii. If Yes:	
• Total number of phases anticipated	
• Anticipated commencement date of phase 1 (including demolition)	month year
Anticipated completion date of final phase	month year
• Generally describe connections or relationships among phases, inclu	iding any contingencies where progress of one phase may
determine timing or duration of future phases:	

f. Does the project	et include new resid	lential uses?			\Box Yes \Box No
If Yes, show num	ibers of units propo	osed.			
	One Family	<u>Two Family</u>	<u>Three Family</u>	Multiple Family (four or more)	
Initial Phase					
At completion					
of all phases		<u> </u>			
g Does the prope	osed action include	new non-residentia	l construction (inclu	iding expansions)?	🗆 Yes 🗆 No
If Yes,	sou detion merude			unig expansions).	- 105 - 110
i. Total number	of structures				
ii. Dimensions (in feet) of largest p	roposed structure:	height;	width; andlength	
iii. Approximate	extent of building	space to be heated	or cooled:	square feet	
h. Does the prope	osed action include	construction or oth	er activities that wil	l result in the impoundment of any	\Box Yes \Box No
liquids, such a	s creation of a wate	er supply, reservoir,	pond, lake, waste la	agoon or other storage?	
If Yes,	· · · · · · · · · · · · · · · · · · ·				
<i>i</i> . Purpose of the	impoundment:	ainal source of the	water	Cround water Surface water stree	ma 🗆 Other specify:
<i>u</i> . If a water http	oundment, the prin	cipal source of the	water.	□ Ground water □ Surface water strea	Ins \Box Other specify.
<i>iii</i> . If other than w	vater, identify the t	ype of impounded/o	contained liquids and	d their source.	
in Approximate	aize of the propose	d imp our dra out	Volumo	million collong: surface erect	
v Dimensions c	size of the proposed dan	a impoundment.	volume:	million gations; surface area:	acres
vi. Construction	method/materials	for the proposed da	m or impounding st	_ length, length ructure (e.g. earth fill rock wood con	crete).
		tor the proposed du	in or impounding su		
D.2. Project Op	erations				
a. Does the prope	osed action include	any excavation, mi	ning, or dredging, d	uring construction, operations, or both?	\square Yes \square No
(Not including	general site prepar	ation, grading or in	stallation of utilities	or foundations where all excavated	
materials will r	emain onsite)				
If Yes:	6.4				
i. What is the pu	irpose of the excav	ation or dredging?		- 1	
<i>ii.</i> How much ma	(specify tops or cu	ck, earth, sediments	s, etc.) is proposed to	b be removed from the site?	
• Volume	(specify tons of cu	oic yards).			
<i>iii</i> Describe natu	re and characteristi	cs of materials to b	e excavated or dreds	yed and plans to use manage or dispos	e of them
				, and prairs to use, manage of anyou	
iv Will there be	onsite dewatering	or processing of ex	cavated materials?		□ Ves □ No
If yes, descri	be.	or processing of ex			
<i>v</i> . What is the to	otal area to be dredg	ged or excavated?		acres	
vi. What is the m	naximum area to be	worked at any one	time?	acres	
vii. What would l	be the maximum de	pth of excavation of	or dredging?	feet	
<i>viii</i> . Will the exca	vation require blas	sting?			\Box Yes \Box No
ix. Summarize sit	e reclamation goals	s and plan:			
b Would the pro-	nosed action cause	or result in alteration	on of increase or de	crease in size of or encroachment	□ Ves □ No
into any existi	ng wetland, waterh	odv. shoreline, bea	ch or adjacent area?	crease in size of, of cheroachinent	
If Yes:		<i>cuj</i> , <i>morenne</i> , <i>ceu</i>	en er unjueent ureu.		
<i>i</i> . Identify the w	vetland or waterboo	ly which would be	affected (by name, v	vater index number, wetland map numb	per or geographic
description):					

<i>ii.</i> Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placed alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in s	ment of structures, or square feet or acres:
	V D.V.
<i>II.</i> Will the proposed action cause or result in disturbance to bottom sediments?	$Y es \sqcup No$
iv Will the proposed action cause or result in the destruction or removal of aquatic vegetation?	□ Ves □ No
If Yes:	- 105 - 110
• acres of aquatic vegetation proposed to be removed:	
• expected acreage of aquatic vegetation remaining after project completion:	
• purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):	
proposed method of plant removal:	
• If chemical/herbicide treatment will be used, specify product(s):	
v. Describe any proposed reclamation/mitigation following disturbance:	
. Will the proposed action use, or create a new demand for water?	\Box Yes \Box No
<i>i</i> Total anticipated water usage/demand per day: gallons/day	
<i>ii</i> Will the proposed action obtain water from an existing public water supply?	🗆 Yes 🗆 No
f Yes:	- 100 - 110
Name of district or service area	
• Does the existing public water supply have capacity to serve the proposal?	□ Yes □ No
 Is the project site in the existing district? 	\Box Yes \Box No
 Is expansion of the district needed? 	\Box Yes \Box No
 Do existing lines serve the project site? 	\Box Yes \Box No
<i>i</i> Will line extension within an existing district he necessary to supply the project?	\Box Tes \Box No
f Ves.	
Describe extensions or capacity expansions proposed to serve this project:	
Source(s) of supply for the district:	
<i>iv.</i> Is a new water supply district or service area proposed to be formed to serve the project site? f, Yes:	□ Yes □ No
Applicant/sponsor for new district:	
Date application submitted or anticipated:	
Proposed source(s) of supply for new district:	
v. If a public water supply will not be used, describe plans to provide water supply for the project:	
vi. If water supply will be from wells (public or private), what is the maximum pumping capacity:	gallons/minute.
. Will the proposed action generate liquid wastes?	\Box Yes \Box No
f Yes:	
<i>i</i> . Total anticipated liquid waste generation per day: gallons/day	
ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe	all components and
approximate volumes or proportions of each):	
Will the proposed notion use any existing public westowater treatment facilities?	
If Yes:	\Box I es \Box NO
• Name of wastewater treatment plant to be used:	
Name of district:	
• Does the existing wastewater treatment plant have capacity to serve the project?	□ Yes □ No
• Is the project site in the existing district?	\Box Yes \Box No

• Do existing server lines serve the project site?	
 Will a line extension within an existing district be necessary to serve the project? 	\Box Yes \Box No
If Yes:	
Describe extensions or capacity expansions proposed to serve this project:	
<i>iv.</i> Will a new wastewater (sewage) treatment district be formed to serve the project site?	□ Yes □ No
If Yes:	
Applicant/sponsor for new district:	·····
Date application submitted or anticipated:	
• What is the receiving water for the wastewater discharge?	if ing proposed
receiving water (name and classification if surface discharge or describe subsurface disposal plans):	
vi. Describe any plans or designs to capture, recycle or reuse liquid waste:	
e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point	\Box Yes \Box No
sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point	
source (i.e. sheet flow) during construction or post construction?	
<i>i</i> How much impervious surface will the project create in relation to total size of project parcel?	
Square feet or acres (impervious surface)	
Square feet or acres (parcel size)	
<i>ii</i> . Describe types of new point sources.	
iii Where will the stormwater runoff he directed (i.e. on site stormwater monogement facility/structures, ediscent n	roportios
<i>iii.</i> where will the stormwater runori be directed (i.e. on-site stormwater management racinty/structures, adjacent pr groundwater on-site surface water or off-site surface waters)?	loperties,
groundwater, on-site surface water of on-site surface waters):	
If to surface waters, identify receiving water bodies or wetlands:	
• Will stormwater runoff flow to adjacent properties?	□ Yes □ No
<i>iv.</i> Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater?	\Box Yes \Box No
f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel	\Box Yes \Box No
combustion, waste incineration, or other processes or operations?	
If Yes, identify:	
<i>i</i> . Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)	
<i>ii.</i> Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)	
<i>iii.</i> Stationary sources during operations (e.g., process emissions, large boilers, electric generation)	
g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration. Air Facility Permit.	□ Yes □ No
or Federal Clean Air Act Title IV or Title V Permit?	
If Yes:	
<i>i</i> . Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year)	\Box Yes \Box No
<i>ii</i> In addition to emissions as calculated in the application, the project will generate:	
• Tons/year (short tons) of Carbon Dioxide (Ω_{2})	
• Tons/year (short tons) of Nitrous Oxide (N ₂ O)	
Tons/year (short tons) of Perfluorocarbons (PFCs)	
• Tons/year (short tons) of Sulfur Hexafluoride (SF _c)	
Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)	
Tons/year (short tons) of Hazardous Air Pollutants (HAPs)	

 h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? If Yes: Estimate methane generation in tone/year (metric); 	□ Yes □ No
 <i>ii.</i> Describe any methane capture, control or elimination measures included in project design (e.g., combustion to ge electricity, flaring): 	enerate heat or
 i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): 	□ Yes □ No
 j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? If Yes: <i>i</i>. When is the peak traffic expected (Check all that apply): □ Morning □ Evening □ Weekend □ Randomly between hours of to <i>ii</i>. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks) 	□ Yes □ No s):
iii. Parking spaces: Existing Proposed Net increase/decrease	
 <i>iv.</i> Does the proposed action include any shared use parking? <i>v.</i> If the proposed action includes any modification of existing roads, creation of new roads or change in existing and the proposed action includes any modification of existing roads. 	Yes No access, describe:
<i>vi.</i> Are public/private transportation service(s) or facilities available within ½ mile of the proposed site?	\Box Yes \Box No
<i>vii</i> Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles?	\Box Yes \Box No
<i>viii.</i> Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes?	□ Yes □ No
 k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? If Ves: 	□ Yes □ No
<i>i</i> . Estimate annual electricity demand during operation of the proposed action:	
<i>ii.</i> Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/le other):	ocal utility, or
<i>iii.</i> Will the proposed action require a new, or an upgrade, to an existing substation?	□ Yes □ No
1. Hours of operation. Answer all items which apply. i. During Construction: ii. During Operations: • Monday - Friday: • Monday - Friday: • Monday - Friday: • Saturday: • Saturday: • Saturday: • Holidays: • Holidays: • Holidays:	

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction,	\Box Yes \Box No
If yes:	
<i>i</i> . Provide details including sources, time of day and duration:	
<i>ii.</i> Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? Describe:	\Box Yes \Box No
n. Will the proposed action have outdoor lighting?	\Box Yes \Box No
<i>i</i> . Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:	
<i>ii.</i> Will proposed action remove existing natural barriers that could act as a light barrier or screen?	□ Yes □ No
Describe:	
o. Does the proposed action have the potential to produce odors for more than one hour per day?	□ Yes □ No
If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:	
 p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? If Yes: 	□ Yes □ No
<i>i</i> . Product(s) to be stored	
<i>iii</i> . Generally, describe the proposed storage facilities:	
a Will the proposed action (commercial industrial and recreational projects only) use pesticides (i.e. herbicides	□ Yes □ No
insecticides) during construction or operation?	_ 105 _ 110
<i>i</i> . Describe proposed treatment(s):	
: Will the proposed action use Integrated Dest Management Practices?	
r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal	\Box Yes \Box No
of solid waste (excluding hazardous materials)?	
<i>i</i> . Describe any solid waste(s) to be generated during construction or operation of the facility:	
Construction: tons per (unit of time)	
• Operation : tons per (unit of time)	
Construction:	
Operation:	
<i>iii.</i> Proposed disposal methods/facilities for solid waste generated on-site:	
Construction:	
• Operation:	· · · · · · · · · · · · · · · · · · ·

s. Does the proposed action include construction or modification of a solid waste management facility?
If Yes:
i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or
other disposal activities):
<i>ii.</i> Anticipated rate of disposal/processing:
• Tons/month, if transfer or other non-combustion/thermal treatment, or
• Tons/hour, if combustion or thermal treatment
iii. If landfill, anticipated site life: years
$= \frac{1}{1}$
t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of nazardous \Box Yes \Box No
Waste?
11 1 CS. i Name(a) of all hazardous westes or constituents to be generated, handled or managed at facility:
i. Ivalle(s) of an hazardous wastes of constituents to be generated, nandred of managed at facility.
<i>ii</i> Generally describe processes or activities involving hazardous wastes or constituents:
iii Specify amount to be handled or generated tons/month
<i>iv.</i> Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents:
···· = ••••••••••••••••••••••••••••••••
v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility?
If Yes: provide name and location of facility:
If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:
E. Site and Setting of Proposed Action
E.1. Land uses on and surrounding the project site
a. Existing land uses.
<i>i</i> . Check all uses that occur on, adjoining and near the project site.
□ Urban □ Industrial □ Commercial □ Residential (suburban) □ Rural (non-farm)
□ Forest □ Agriculture □ Aquatic □ Other (specify):

ii. If mix of uses, generally describe:

•

•

•

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•

•

•

surfaces Forested

Agricultural

Other

Surface water features

b. Land uses and covertypes on the project site.

Land use or

Covertype

Meadows, grasslands or brushlands (non-

(lakes, ponds, streams, rivers, etc.) Wetlands (freshwater or tidal)

Describe:

Non-vegetated (bare rock, earth or fill)

agricultural, including abandoned agricultural)

(includes active orchards, field, greenhouse etc.)

Roads, buildings, and other paved or impervious

Current

Acreage

Change

(Acres +/-)

Acreage After

Project Completion

c. Is the project site presently used by members of the community for public recreation?<i>i</i>. If Yes: explain:	\Box Yes \Box No
 d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? If Yes, <i>i</i>. Identify Facilities: 	□ Yes □ No
e. Does the project site contain an existing dam?	□ Yes □ No
If Yes: <i>i</i> Dimensions of the dam and impoundment:	
Dam height: feet	
• Dam length: feet	
• Surface area: acres	
Volume impounded: gallons OR acre-feet	
<i>iii.</i> Provide date and summarize results of last inspection:	
f Has the project site ever been used as a municipal commercial or industrial solid waste management facility	
or does the project site adjoin property which is now, or was at one time, used as a solid waste management facil If Yes:	ity?
<i>i</i> . Has the facility been formally closed?	\Box Yes \Box No
If yes, cite sources/documentation:	· · · · · · · · · · · · · · · · · · ·
<i>ii.</i> Describe the location of the project site relative to the boundaries of the solid waste management facility:	
<i>iii</i> . Describe any development constraints due to the prior solid waste activities:	
 g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? If Yes: <i>i.</i> Describe waste(s) handled and waste management activities, including approximate time when activities occurred. 	□ Yes □ No
 h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? If Yes: 	□ Yes □ No
<i>i</i> . Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply:	\Box Yes \Box No
□ Yes – Spills Incidents database Provide DEC ID number(s):	
 Yes – Environmental Site Remediation database Provide DEC ID number(s):	
<i>ii</i> . If site has been subject of RCRA corrective activities, describe control measures:	
<i>iii.</i> Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? If yes, provide DEC ID number(s):	□ Yes □ No
<i>iv.</i> If yes to (i), (ii) or (iii) above, describe current status of site(s):	

v. Is the project site subject to an institutional control limiting property uses?	\Box Yes \Box No
 If yes, DEC site ID number: Describe the type of institutional control (e.g. deed restriction or accoment); 	· · · · · · · · · · · · · · · · · · ·
 Describe any use limitations: 	
Describe any engineering controls:	
• Will the project affect the institutional or engineering controls in place?	\Box Yes \Box No
• Explain:	
E.2. Natural Resources On or Near Project Site	
a. What is the average depth to bedrock on the project site? feet	
b. Are there bedrock outcroppings on the project site? If Yes, what proportion of the site is comprised of bedrock outcroppings?%	\Box Yes \Box No
c Predominant soil type(s) present on project site:	,
C. I redominant son type(s) present on project site	, , 0
%	, D
d. What is the average depth to the water table on the project site? Average: feet	
e. Drainage status of project site soils: Well Drained: % of site	
□ Moderately Well Drained:% of site	
= 10011y Drained $/001 site$	
1. Approximate proportion of proposed action site with slopes: $\Box 0-10\%$: $\Box 0-10\%$: $\%$ of site $\Box 10-15\%$: % of site	
\Box 15% or greater:% of site	
g. Are there any unique geologic features on the project site?	\Box Yes \Box No
If Yes, describe:	
h. Surface water features.	
<i>i</i> . Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)?	\Box Yes \Box No
<i>ii.</i> Do any wetlands or other waterbodies adjoin the project site?	□ Yes □ No
If Yes to either <i>i</i> or <i>ii</i> , continue. If No, skip to E.2.i.	
<i>iii.</i> Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal,	\Box Yes \Box No
state or local agency?	
Streams: Name Classification	
Lakes or Ponds: Name Classification	
Wetlands: Name Approximate Size Wetland No. (if regulated by DEC)	
<i>v</i> . Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired	\Box Yes \Box No
waterbodies?	
If yes, name of impaired water body/bodies and basis for listing as impaired:	
i. Is the project site in a designated Floodway?	\Box Yes \Box No
j. Is the project site in the 100-year Floodplain?	\Box Yes \Box No
k. Is the project site in the 500-year Floodplain?	\Box Yes \Box No
 I. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? If Yes: i. Name of aquifer: 	□ Yes □ No

m Identify the predominant wildlife species that occupy or use the project site.	
n. Does the project site contain a designated significant natural community?	\Box Yes \Box No
<i>i</i> Describe the habitat/community (composition function and hasis for designation):	
i. Describe the nabital community (composition, function, and basis for designation).	
<i>ii.</i> Source(s) of description or evaluation:	
<i>iii</i> . Extent of community/habitat:	
Currently:acres	
Following completion of project as proposed: acres	
• Gain or loss (indicate + or -):acres	
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as	□ Yes □ No
endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened	species?
If Yes:	
<i>i</i> . Species and listing (endangered or threatened):	
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species o	\Box Yes \Box No
special concern?	
If Yes:	
i. Species and listing.	
a. Is the project site or adjoining area currently used for hunting trapping fishing or shell fishing?	□ Ves □ No
If yes, give a brief description of how the proposed action may affect that use:	
E.3. Designated Public Resources On or Near Project Site	
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to	\Box Yes \Box No
Agriculture and Markets Law, Article 25-AA, Section 303 and 304?	
If Yes, provide county plus district name/number:	
b Are agricultural lands consisting of highly productive soils present?	□ Yes □ No
<i>i.</i> If Yes: acreage(s) on project site?	- 105 - 110
ii. Source(s) of soil rating(s):	
c. Does the project site contain all or part of or is it substantially continuous to a registered National	□ Ves □ No
Natural Landmark?	
If Yes:	
<i>i</i> . Nature of the natural landmark:	
ii. Provide brief description of landmark, including values behind designation and approximate size/extent	:
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area?	□ Yes □ No
If Yes:	
<i>i</i> . CEA name:	
ii. Basis for designation:	
iii. Designating agency and date:	

e. Does the project site contain, or is it substantially contiguous to, a buil which is listed on the National or State Register of Historic Places, or	ding, archaeological site, or district that has been determined by the Commissi	Yes No oner of the NYS
Office of Parks, Recreation and Historic Preservation to be eligible for	listing on the State Register of Historic Pl	aces?
<i>i</i> . Nature of historic/archaeological resource: Archaeological Site <i>ii</i> . Name: Cherry Hill, Mendelson, A., & Son Company Building	Historic Building or District	
iii. Brief description of attributes on which listing is based:		
f. Is the project site, or any portion of it, located in or adjacent to an area archaeological sites on the NY State Historic Preservation Office (SHI	designated as sensitive for PO) archaeological site inventory?	Ves No
g. Have additional archaeological or historic site(s) or resources been ide	ntified on the project site?	Yes No
If Yes:		
<i>i</i> . Describe possible resource(s):		
ii. Basis for identification:		
h. Is the project site within fives miles of any officially designated and p scenic or aesthetic resource?	ublicly accessible federal, state, or local	Yes No
If Yes:		
i. Identify resource:	1 1 1 to be state historia trail a	- scenic bury
ii. Nature of, or basis for, designation (e.g., established highway overlow etc.):	ok, state or local park, state historic tran o	I Seeme by way,
iii. Distance between project and resource: mi	les.	
 Is the project site located within a designated river corridor under the Program 6 NYCRR 666? 	Wild, Scenic and Recreational Rivers	Yes No
If Yes:		
i. Identify the name of the river and its designation:		
ii. Is the activity consistent with development restrictions contained in 6	NYCRR Part 666?	L res Livo

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Tom Keefe Global Companies LLC Date 3/19/2020

Signature

Title Vice President, Environmental Health and Safety



B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	Remediaton Sites:546031, NYS Heritage Areas:Mohawk Valley Heritage Corridor
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Yes - Digital mapping data for Spills Incidents are not available for this location. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Yes
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Yes
E.1.h.i [DEC Spills or Remediation Site - DEC ID Number]	546031
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	546031, 442004, 442022, V00521, V00464, 442027, C442035, B00005, B00055, 442009
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Hudson River (Class C) – Priority Organics – Fish Consumption

E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.I. [Aquifers]	Yes
E.2.I. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Tidal River
E.2.n.i [Natural Communities - Acres]	74248.64
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Shortnose Sturgeon
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National Register of Historic Places]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National Register of Historic Places - Name]	Cherry Hill, Mendelson, A., & Son Company Building
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No



PERMIT Under the Environmental Conservation Law (ECL)

IDENTIFICATION INFORMATION

Permit Type: Permit ID:	Air Title V Facility 4-0101-00112/00029 Mod 0 Effective Date: 03/03/2011 Expiration Date: 03/02/2016
	Mod 1 Effective Date: 08/10/2011 Expiration Date: 03/02/2016
	Mod 2 Effective Date: 08/29/2011 Expiration Date: 03/02/2016
	Mod 3 Effective Date: 11/02/2011 Expiration Date: 03/02/2016
	Mod 4 Effective Date: 11/07/2012 Expiration Date: 03/02/2016
Permit Issued	To:GLOBAL COMPANIES LLC 800 SOUTH STREET WALTHAM, MA 02453
Facility:	GLOBAL COMPANIES LLC - ALBANY TERMINAL 50 CHURCH ST - PORT OF ALBANY ALBANY, NY 12202

Contact: DARRELL BOEHLKE CHARLES FURMAN GLOBAL CO ALBANY TERMINAL 50 CHURCH ST ALBANY, NY 12202 (518) 436-6570

Description:

This modification authorizes the storage of crude oil and loading into barges at the facility's marine loading terminal. A new Vapor Combustion Unit (VCU) will be utilized to control air emissions. The facility increased the overall emissions profile with this modification.



By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified and any Special Conditions included as part of this permit.

Permit Administrator:

ANGELO A MARCUCCIO NYSDEC 1130 N WESTCOTT RD SCHENECTADY, NY 12306-2014

Authorized Signature:

Date: ____ / ____ / ____



Notification of Other State Permittee Obligations

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification

The permittee expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the compliance permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in any compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



LIST OF CONDITIONS

DEC GENERAL CONDITIONS

General Provisions Facility Inspection by the Department Relationship of this Permit to Other Department Orders and Determinations Applications for permit renewals, modifications and transfers Permit modifications, suspensions or revocations by the Department Permit modifications, suspensions or revocations by the Department Facility Level Submission of application for permit modification or renewal-REGION 4 HEADQUARTERS



DEC GENERAL CONDITIONS **** General Provisions **** For the purpose of your Title V permit, the following section contains state-only enforceable terms and conditions. GENERAL CONDITIONS - Apply to ALL Authorized Permits.

Condition 1: Facility Inspection by the Department Applicable State Requirement: ECL 19-0305

Item 1.1:

The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3).

Item 1.2:

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

Item 1.3:

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Condition 2: Relationship of this Permit to Other Department Orders and Determinations Applicable State Requirement: ECL 3-0301 (2) (m)

Item 2.1:

Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Condition 3: Applications for permit renewals, modifications and transfers Applicable State Requirement: 6 NYCRR 621.11

Item 3.1:

The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

Item 3.2:

The permittee must submit a renewal application at least 180 days before expiration of permits for Title V Facility Permits, or at least 30 days before expiration of permits for State Facility Permits.

Item 3.3:

Permits are transferrable with the approval of the department unless specifically prohibited by the statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

DEC Permit Conditions Renewal 2/Mod 4/FINAL



Condition 1-1: Permit modifications, suspensions or revocations by the Department Applicable State Requirement: 6 NYCRR 621.13

Item 1-1.1:

The Department reserves the right to exercise all available authority to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

a) materially false or inaccurate statements in the permit application or supporting papers;b) failure by the permittee to comply with any terms or conditions of the permit;

c) exceeding the scope of the project as described in the permit application;

d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit; e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

Condition 4: Permit modifications, suspensions or revocations by the Department Applicable State Requirement: 6 NYCRR 621.13

Item 4.1:

The Department reserves the right to modify, suspend, or revoke this permit in accordance with 6NYCRR Part 621. The grounds for modification, suspension or revocation include:

a) materially false or inaccurate statements in the permit application or supporting papers;

b) failure by the permittee to comply with any terms or conditions of the permit;

c) exceeding the scope of the project as described in the permit application;

d) newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit; e) noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

**** Facility Level ****

Condition 5: Submission of application for permit modification or renewal-REGION 4 HEADQUARTERS Applicable State Requirement: 6 NYCRR 621.6 (a)

Item 5.1:

Submission of applications for permit modification or renewal are to be submitted to:

NYSDEC Regional Permit Administrator Region 4 Headquarters Division of Environmental Permits 1130 North Westcott Rd. Schenectady, NY 12306-2014 (518) 357-2069

> DEC Permit Conditions Renewal 2/Mod 4/FINAL



Permit Under the Environmental Conservation Law (ECL)

ARTICLE 19: AIR POLLUTION CONTROL - TITLE V PERMIT

IDENTIFICATION INFORMATION

Permit Issued To:GLOBAL COMPANIES LLC 800 SOUTH STREET WALTHAM, MA 02453

Facility: GLOBAL COMPANIES LLC - ALBANY TERMINAL 50 CHURCH ST - PORT OF ALBANY ALBANY, NY 12202

Authorized Activity By Standard Industrial Classification Code: 5171 - PETROLEUM BULK STATIONS & TERMINALS

Mod 0 Permit Effective Date: 03/03/2011	Permit Expiration Date: 03/02/2016
Mod 1 Permit Effective Date: 08/10/2011	Permit Expiration Date: 03/02/2016
Mod 2 Permit Effective Date: 08/29/2011	Permit Expiration Date: 03/02/2016
Mod 3 Permit Effective Date: 11/02/2011	Permit Expiration Date: 03/02/2016
Mod 4 Permit Effective Date: 11/07/2012	Permit Expiration Date: 03/02/2016



LIST OF CONDITIONS

FEDERALLY ENFORCEABLE CONDITIONS Facility Level

- 1 6 NYCRR 200.6: Acceptable Ambient Air Quality
- 2 6 NYCRR 201-6.5 (a) (7): Fees
- 3 6 NYCRR 201-6.5 (c): Recordkeeping and reporting of compliance monitoring
- 4 6 NYCRR 201-6.5 (c) (2): Monitoring, Related Recordkeeping, and Reporting Requirements.
- 5 6 NYCRR 201-6.5 (c) (3) (ii): Compliance Certification
- 2-1 6 NYCRR 201-6.5 (e): Compliance Certification
- 6 6 NYCRR 202-2.1: Compliance Certification
- 7 6 NYCRR 202-2.5: Recordkeeping requirements
- 8 6 NYCRR 215.2: Open Fires Prohibitions
- 9 6 NYCRR 200.7: Maintenance of Equipment
- 10 6 NYCRR 201-1.7: Recycling and Salvage
- 11 6 NYCRR 201-1.8: Prohibition of Reintroduction of Collected Contaminants to the air
- 12 6 NYCRR 201-3.2 (a): Exempt Sources Proof of Eligibility
- 13 6 NYCRR 201-3.3 (a): Trivial Sources Proof of Eligibility
- 14 6 NYCRR 201-6.5 (a) (4): Standard Requirement Provide Information
- 15 6 NYCRR 201-6.5 (a) (8): General Condition Right to Inspect
- 16 6 NYCRR 201-6.5 (d) (5): Standard Requirements Progress Reports
- 17 6 NYCRR 201-6.5 (f) (6): Off Permit Changes
- 18 6 NYCRR 202-1.1: Required Emissions Tests
- 20 40 CFR Part 68: Accidental release provisions.
- 21 40CFR 82, Subpart F: Recycling and Emissions Reduction
- 22 6 NYCRR Subpart 201-6: Emission Unit Definition
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- 107 6 NYCRR Subpart 201-6: Process Definition By Emission Unit

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- 109 ECL 19-0301 (3) (b): Compliance Demonstration
- 110 6 NYCRR 201-1.4: Unavoidable noncompliance and violations
- 1-9 6 NYCRR 211.2: Visible Emissions Limited

NOTE: * preceding the condition number indicates capping.



FEDERALLY ENFORCEABLE CONDITIONS **** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS The items listed below are not subject to the annual compliance certification requirements under Title V. Permittees may also have other obligations under regulations of general applicability.

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency constitutes an affirmative defense to an action brought for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner

and/or

operator can identify the cause(s) of the emergency;

(2) The equipment at the permitted facility causing the emergency was at the time being properly operated;

(3) During the period of the emergency the facility owner and/or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) The facility owner and/or operator notified the Department within two working days after the event occurred. This

within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner and/or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

Item B:Public Access to Recordkeeping for Title V Facilities - 6
NYCRR 201-1.10 (b)
The Department will make available to the public any
permit application, compliance plan, permit, and
monitoring and compliance certification report pursuant to
Section 503(e) of the Act, except for information entitled
to confidential treatment pursuant to 6 NYCRR Part 616 -
Public Access to records and Section 114(c) of the Act.



Permit ID: 4-0101-00112/00029

Item C: Timely Application for the Renewal of Title V Permits - 6 NYCRR 201-6.3 (a) (4) Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Item D: Certification by a Responsible Official - 6 NYCRR 201-6.3 (d)(12)

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Item E: **Requirement to Comply With All Conditions - 6 NYCRR** 201-6.5 (a) (2)

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item F: Permit Revocation, Modification, Reopening, Reissuance or **Termination. and Associated Information Submission Requirements - 6 NYCRR 201-6.5 (a) (3)** This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Item G: **Cessation or Reduction of Permitted Activity Not a** Defense - 6 NYCRR 201-6.5 (a) (5) It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

Item H: Property Rights - 6 NYCRR 201-6.5 (a) (6)

This permit does not convey any property rights of any sort or any exclusive privilege.



Item I: Severability - 6 NYCRR 201-6.5 (a) (9)

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

Item J: Permit Shield - 6 NYCRR 201-6.5 (g)

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;

ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;

iii. The applicable requirements of Title IV of the Act;

iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item K: Reopening for Cause - 6 NYCRR 201-6.5 (i)

This Title V permit shall be reopened and revised under any of the following circumstances:

i. If additional applicable requirements under the Act become applicable where this permit's remaining term is



three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.

ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.

iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item L: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York



(NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item M: Federally Enforceable Requirements - 40 CFR 70.6 (b) All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT TO ANNUAL CERTIFICATIONS AT ALL TIMES

The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements at all times.

Condition 1: Acceptable Ambient Air Quality Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 200.6

Item 1.1:

Notwithstanding the provisions of 6 NYCRR Chapter III, Subchapter A, no person shall allow or permit any air contamination source to emit air contaminants in quantities which alone or in combination with emissions from other air contamination sources would contravene any applicable ambient air quality standard and/or cause air pollution. In such cases where contravention occurs or may occur, the Commissioner shall specify the degree and/or method of emission control required.

Condition 2: Fees Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (7)

Item 2.1:

The owner and/or operator of a stationary source shall pay fees to the Department consistent with the fee schedule authorized by ECL 72-0303.

Condition 3: Recordkeeping and reporting of compliance monitoring Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c)

Item 3.1:



The following information must be included in any required compliance monitoring records and reports:

(i) The date, place, and time of sampling or measurements;

(ii) The date(s) analyses were performed;

(iii)The company or entity that performed the analyses;

(iv) The analytical techniques or methods used including quality assurance and quality control procedures if required;

(v) The results of such analyses including quality assurance data where required; and

(vi) The operating conditions as existing at the time of sampling or measurement.

Any deviation from permit requirements must be clearly identified in all records and reports. Reports must be certified by a responsible official, consistent with Section 201-6.3 of this Part 201.

Condition 4: Monitoring, Related Recordkeeping, and Reporting Requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c) (2)

Item 4.1:

Compliance monitoring and recordkeeping shall be conducted according to the terms and conditions contained in this permit and shall follow all quality assurance requirements found in applicable regulations. Records of all monitoring data and support information must be retained for a period of at least 5 years from the date of the monitoring, sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

Condition 5: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (c) (3) (ii)

Item 5.1:

The Compliance Certification activity will be performed for the Facility.

Item 5.2: Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

To meet the requirements of this facility permit with respect to reporting, the permittee must:

Submit reports of any required monitoring at a minimum

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frequency of every 6 months, based on a calendar year reporting schedule. These reports shall be submitted to the Department within 30 days after the end of a reporting period. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the responsible official for this facility.

Notify the Department and report permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations shall be submitted to the permitting authority based on the following schedule:

(1) For emissions of a hazardous air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.

(2) For emissions of any regulated air pollutant, excluding those listed in paragraph (1) of this section, that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.

(3) For all other deviations from permit requirements, the report shall be contained in the 6 month monitoring report required above.

(4) This permit may contain a more stringent reporting requirement than required by paragraphs (1), (2) or (3) above. If more stringent reporting requirements have been placed in this permit or exist in applicable requirements that apply to this facility, the more stringent reporting requirement shall apply.

If above paragraphs (1) or (2) are met, the source must notify the permitting authority by telephone during normal business hours at the Regional Office of jurisdiction for this permit, attention Regional Air Pollution Control Engineer (RAPCE) according to the timetable listed in paragraphs (1) and (2) of this section. For deviations and incidences that must be reported outside of normal business hours, on weekends, or holidays, the DEC Spill Hotline phone number at 1-800-457-7362 shall be used. A



written notice, certified by a responsible official consistent with 6 NYCRR Part 201-6.3(d)(12), must be submitted within 10 working days of an occurrence for deviations reported under (1) and (2). All deviations reported under paragraphs (1) and (2) of this section must also be identified in the 6 month monitoring report required above.

The provisions of 6 NYCRR 201-1.4 shall apply if the permittee seeks to have a violation excused unless otherwise limited by regulation. In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets. Notwithstanding any recordkeeping and reporting requirements in 6 NYCRR 201-1.4, reports of any deviations shall not be on a less frequent basis than the reporting periods described in paragraphs (1) and (4) above.

In the case of any condition contained in this permit with a reporting requirement of "Upon request by regulatory agency" the permittee shall include in the semiannual report, a statement for each such condition that the monitoring or recordkeeping was performed as required or requested and a listing of all instances of deviations from these requirements.

In the case of any emission testing performed during the previous six month reporting period, either due to a request by the Department, EPA, or a regulatory requirement, the permittee shall include in the semiannual report a summary of the testing results and shall indicate whether or not the Department or EPA has approved the results.

All semiannual reports shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Mailing addresses for the above referenced persons are contained in the monitoring condition for 6 NYCRR Part 201-6.5(e), contained elsewhere in this permit.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.


Subsequent reports are due every 6 calendar month(s).

Condition 2-1: Compliance Certification Effective between the dates of 08/29/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (e)

Item 2-1.1:

The Compliance Certification activity will be performed for the Facility.

Item 2-1.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Requirements for compliance certifications with terms and conditions contained in this facility permit include the following:

i. Compliance certifications shall contain:

- the identification of each term or condition of the permit that is the basis of the certification;

- the compliance status;

- whether compliance was continuous or intermittent;

- the method(s) used for determining the compliance status of the facility, currently and over the reporting period consistent with the monitoring and related recordkeeping and reporting requirements of this permit;

- such other facts as the Department may require to determine the compliance status of the facility as specified in any special permit terms or conditions; and

- such additional requirements as may be specified elsewhere in this permit related to compliance certification.

ii. The responsible official must include in the annual certification report all terms and conditions contained in this permit which are identified as being subject to certification, including emission limitations, standards, or work practices. That is, the provisions labeled herein as "Compliance Certification" are not the only provisions of this permit for which an annual certification is required.

iii. Compliance certifications shall be submitted annually. Certification reports are due 30 days after the anniversary date of four consecutive calendar quarters. The first report is due 30 days after the calendar quarter that occurs just prior to the permit anniversary date, unless another quarter has been acceptable by the Department.



iv. All compliance certifications shall be submitted to the Administrator (or his or her representative) as well as two copies to the Department (one copy to the regional air pollution control engineer (RAPCE) in the regional office and one copy to the Bureau of Quality Assurance (BQA) in the DEC central office). Please send annual compliance certifications to Chief of the Stationary Source Compliance Section, the Region 2 EPA representative for the Administrator, at the following address:

USEPA Region 2 Air Compliance Branch 290 Broadway New York, NY 10007-1866

The address for the RAPCE is as follows:

NYSDEC 1130 North Westcott Road Schenectady, NY 12306-2014

The address for the BQA is as follows:

NYSDEC Bureau of Quality Assurance 625 Broadway Albany, NY 12233-3258

Monitoring Frequency: ANNUALLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due on the same day each year

Condition 6: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-2.1

Item 6.1:

The Compliance Certification activity will be performed for the Facility.

Item 6.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.



Monitoring Frequency: ANNUALLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due by April 15th for previous calendar year

Condition 7: Recordkeeping requirements Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-2.5

Item 7.1:

(a) The following records shall be maintained for at least five years:

(1) a copy of each emission statement submitted to the department; and

(2) records indicating how the information submitted in the emission statement was determined, including any calculations, data, measurements, and estimates used.

(b) These records shall be made available at the facility to the representatives of the department upon request during normal business hours.

Condition 8: Open Fires - Prohibitions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 215.2

Item 8.1:

Except as allowed by Title 6 NYCRR Section 215.3, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

Item 8.2

Per Section 215.3, burning in an open fire, provided it is not contrary to other law or regulation, will be allowed as follows:

(a) On-site burning in any town with a total population less than 20,000 of downed limbs and branches (including branches with attached leaves or needles) less than six inches in diameter and eight feet in length between May 15th and the following March 15th. For the purposes of this subdivision, the total population of a town shall include the population of any village or portion thereof located within the town. However, this subdivision shall not be construed to allow burning within any village.

(b) Barbecue grills, maple sugar arches and similar outdoor cooking devices when actually used for cooking or processing food.

(c) Small fires used for cooking and camp fires provided that only charcoal or untreated wood is used as fuel and the fire is not left unattended until extinguished.

(d) On-site burning of agricultural wastes as part of a valid agricultural operation on contiguous agricultural lands larger than five acres actively devoted to agricultural or horticultural use, provided such waste is actually grown or generated on those lands and such waste is capable of being fully burned within a 24-hour period.

(e) The use of liquid petroleum fueled smudge pots to prevent frost damage to crops.

(f) Ceremonial or celebratory bonfires where not otherwise prohibited by law, provided that only untreated wood or other agricultural products are used as fuel and the fire is not left unattended until extinguished.

(g) Small fires that are used to dispose of a flag or religious item, and small fires or other smoke producing process where not otherwise prohibited by law that are used in connection with a

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religious ceremony.

(h) Burning on an emergency basis of explosive or other dangerous or contraband materials by police or other public safety organization.

(i) Prescribed burns performed according to Part 194 of this Title.

(j) Fire training, including firefighting, fire rescue, and fire/arson investigation training, performed under applicable rules and guidelines of the New York State Department of State's Office of Fire Prevention and Control. For fire training performed on acquired structures, the structures must be emptied and stripped of any material that is toxic, hazardous or likely to emit toxic smoke (such as asbestos, asphalt shingles and vinyl siding or other vinyl products) prior to burning and must be at least 300 feet from other occupied structures. No more than one structure per lot or within a 300 foot radius (whichever is bigger) may be burned in a training exercise. (k) Individual open fires as approved by the Director of the Division of Air Resources as may be required in response to an outbreak of a plant or animal disease upon request by the commissioner of the Department of Agriculture and Markets, or for the destruction of invasive plant and insect species.

(1) Individual open fires that are otherwise authorized under the environmental conservation law, or by rule or regulation of the Department.

MANDATORY FEDERALLY ENFORCEABLE PERMIT CONDITIONS SUBJECT TO ANNUAL CERTIFICATIONS ONLY IF APPLICABLE

The following federally enforceable permit conditions are mandatory for all Title V permits and are subject to annual compliance certification requirements only if effectuated during the reporting period. [NOTE: The corresponding annual compliance certification for those conditions not effectuated during the reporting period shall be specified as "not applicable".]

Condition 9: Maintenance of Equipment Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 200.7

Item 9.1:

Any person who owns or operates an air contamination source which is equipped with an emission control device shall operate such device and keep it in a satisfactory state of maintenance and repair in accordance with ordinary and necessary practices, standards and procedures, inclusive of manufacturer's specifications, required to operate such device effectively.

Condition 10: Recycling and Salvage Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-1.7

Item 10.1:

Where practical, any person who owns or operates an air contamination source shall recycle or salvage air contaminants collected in an air cleaning device according to the requirements of the ECL.



Condition 11: Prohibition of Reintroduction of Collected Contaminants to the air

Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-1.8

Item 11.1:

No person shall unnecessarily remove, handle or cause to be handled, collected air contaminants from an air cleaning device for recycling, salvage or disposal in a manner that would reintroduce them to the outdoor atmosphere.

Condition 12: Exempt Sources - Proof of Eligibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-3.2 (a)

Item 12.1:

The owner and/or operator of an emission source or unit that is eligible to be exempt may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other State and Federal air pollution control requirements, regulations, or law.

Condition 13: Trivial Sources - Proof of Eligibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 201-3.3 (a)

Item 13.1:

The owner and/or operator of an emission source or unit that is listed as being trivial in this Part may be required to certify that it operates within the specific criteria described in this Subpart. The owner or operator of any such emission source must maintain all required records on-site for a period of five years and make them available to representatives of the department upon request. Department representatives must be granted access to any facility which contains emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other State and Federal air pollution control requirements, regulations, or law.

Condition 14: Standard Requirement - Provide Information Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (4)

Item 14.1:

The owner and/or operator shall furnish to the department, within a reasonable time, any information that the department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the department copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee



may furnish such records directly to the administrator along with a claim of confidentiality, if the administrator initiated the request for information or otherwise has need of it.

Condition 15: General Condition - Right to Inspect Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (a) (8)

Item 15.1:

The department or an authorized representative shall be allowed upon presentation of credentials and other documents as may be required by law to:

(i) enter upon the permittee's premises where a facility subject to the permitting requirements of this Subpart is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(ii) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(iii) inspect at reasonable times any emission sources, equipment (including monitoring and air pollution control equipment), practices, and operations regulated or required under the permit; and

(iv) sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

Condition 16: Standard Requirements - Progress Reports Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (d) (5)

Item 16.1:

Progress reports consistent with an applicable schedule of compliance are to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the department. Such progress reports shall contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

Condition 17: Off Permit Changes Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 201-6.5 (f) (6)

Item 17.1:

No permit revision will be required for operating changes that contravene an express permit term, provided that such changes would not violate applicable requirements as defined under this Part or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting, or compliance certification permit terms and conditions. Such changes may be made

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without requiring a permit revision, if the changes are not modifications under any provision of title I of the act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions) provided that the facility provides the administrator and the department with written notification as required below in advance of the proposed changes within a minimum of seven days. The facility owner or operator, and the department shall attach each such notice to their copy of the relevant permit.

(i) For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

(ii) The permit shield described in section 6 NYCRR 201-6.6 shall not apply to any change made pursuant to this paragraph.

Condition 18: Required Emissions Tests Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-1.1

Item 18.1:

For the purpose of ascertaining compliance or non-compliance with any air pollution control code, rule or regulation, the commissioner may require the person who owns such air contamination source to submit an acceptable report of measured emissions within a stated time.

Condition 20: Accidental release provisions. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 68

Item 20.1:

If a chemical is listed in Tables 1,2,3 or 4 of 40 CFR §68.130 is present in a process in quantities greater than the threshold quantity listed in Tables 1,2,3 or 4, the following requirements will apply:

a) The owner or operator shall comply with the provisions of 40 CFR Part 68 and;

b) The owner or operator shall submit at the time of permit issuance (if not previously submitted) one of the following, if such quantities are present:

1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR §68.10(a) or,

2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan. Information should be submitted to:

Risk Management Plan Reporting Center C/O CSC 8400 Corporate Dr Carrollton, Md. 20785



Condition 21: Recycling and Emissions Reduction Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 40CFR 82, Subpart F

Item 21.1:

The permittee shall comply with all applicable provisions of 40 CFR Part 82.

The following conditions are subject to annual compliance certification requirements for Title V permits only.

Condition 22: Emission Unit Definition Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 22.1(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK1 1-RACKT **Emission Unit Description:**

Truck loading rack with three gasoline/ethanol bays and five distillate bays.

Truck Rack Minor Mod language replaced by language proposed in current application.

Item 22.2(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK2 2-RACKR Rail Rack Minor Mod language **Emission Unit Description:** replaced by language proposed in Railcar loading rack with two loading positions for distillate and gasoline/ethanol. current application.

Item 22.3(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK3 3-RACKM **Emission Unit Description:** This emission unit represents marine loading of products at the dock. Marine loading dock.

Item 22.4(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-RACK4 Emission Unit Description:

Rail spur for distillate loading.

Item 22.5(From Mod 4):

The facility is authorized to perform regulated processes under this permit for: Emission Unit: 1-TANKS 1-TANK1 **Emission Unit Description:**

Add Emission Unit: 1-PWMRP: Description: Petroleum/water

mixture reclamation process

Description: 1-FUGTV facility

Add Emission Unit:

wide fugitive emissions

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This emission unit represents storage tanks at the facility.

Condition 24: Facility Permissible Emissions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 24.1:

The sum of emissions from the emission units specified in this permit shall not equal or exceed the following

Potential To Emit (PTE) rate for each regulated contaminant:

per year	CAS No: 0NY100-00-0	(From Mod 4)	PTE:	47,500 pounds
	Name: HAP			205 300
per year	CAS No: 0NY998-00-0	(From Mod 4)	PTE:	294,540 pounds
	Name: VOC			

Condition 3-1: **Capping Monitoring Condition** Effective between the dates of 11/02/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 3-1.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

> 6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 3-1.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 3-1.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 3-1.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time

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period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 3-1.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 3-1.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2 2-RACKR Process: R2E RPR

Emission Unit: 1-RACK2 Process: R2G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 3-1.7:

Compliance Certification shall include the following monitoring:

Capping: Yes

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Gasoline/Ethanol Refined Product throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Gasoline/ Ethanol Refined Product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current version of AP-42-emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 2 milligrams per liter, and a Marine Vapor Combustion Unit emission rate of 10 mg/l, it and the set of th

emission rate of 10 mg/l with negative pressure loading (vac assist) to eliminate fugitive emissions from loading rail cars.

Refined Product Gasoline/Ethanol throughputs shall be included in the annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE ETHANOL, DISTILLATE, BIODIESEL Upper Permit Limit: 150,000,000 gallons 300,000,000 gallons



Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-1: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-1.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR 63 Subpart R

Item 4-1.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-1.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-1.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-1.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-1.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT	Emission Unit: 2-RACKR
Process: R1E RPT, FGT	Process: RPR, FGR
Emission Unit: 1-RACK1	Emission Unit: 3-RACKM Process: RPM, BSM, FGM

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Process: R1G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-1.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year, that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP.

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits for this specific cap were calculated using a Truck Vapor Recovery Unit emission rate of 10 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, a Marine Vapor Combustion Unit emission rate of 10 mg/l.

This throughput alottment is useable during times when the Vacuum Assist Vapor Reduction System is not operational.

Gasoline/Ethanol throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE Upper Permit Limit: 10,416,667 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-2: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-2.1:

Renewal 2/Mod 4/Active

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the

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Replace with capping condition for Refined Product Alternate Operating Scenarios (AOSs).



purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-2.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-2.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-2.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-2.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-2.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process:-R3E RPM

Emission Unit: 1-RACK3 Process: R3G

Regulated Contaminant(s): CAS No: 0NY998-00-0

CAS No: 0NY998-00-0	VOC
CAS No: 0NY100-00-0	HAP

Item 4-2.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description:



Refined Product

Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63. Subpart R. This absolves the facility from that NESHAP. Refined Product Gasoline/Ethanol throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6. Emissions for this cap were calculated using the most current version of AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 2 form 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emission rate of 2 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values

Add condition for Blendstock loading - see form

which were approved by Central Office on 6/28/2012., and with negative pressure loading (vac assist) to eliminate fugitive emissions from loading. Refined Product

Gasoline/Ethanol throughputs shall be included in the annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: OTHER LIQUID FUELS GASOLINE, ETHANOL, DISTILLATES, and BIODIESEL Upper Permit Limit: 450,000,000 gallons Monitoring Frequency: MONTHLY 900,000,000 gallons Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 1-3: Capping Monitoring Condition Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 1-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission

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Renewal 2/Mod 4/Active



limits, terms, conditions and standards in this permit.

Item 1-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-3.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Emission Unit: 3-RACKM

Control Device: VCUM1

Process: BSM

Item 1-3.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3E RPM

Emission Unit: 1-RACK3 3-RACKM Process: R3G CDM

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP CAS No: 0NY998-00-0 VOC

Item 1-3.7:

Compliance Certification shall include the following monitoring:

Capping: Yes WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Type: INTERMITTENT EMISSION TESTING

Monitoring Description:

The emission rate of the Marine vapor combustion unit (VCUM1) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

Facility wide emissions were determined using the most current AP-42 emission factors and "TANKS" program. The



throughput limits were calculated using a The Marine Vapor Combustion Unit (VCUM1) will be operated at a maximum emission rate of 10 milligrams per liter.

This compliance test shall also demonstrate compliance with 6 NYCRR 212.4(a)

The vapor recovery unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date or 180 days after complete construction and operability of VCU, to determine if the vapor combustion unit achieves the 10 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 10 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 2-3: Capping Monitoring Condition Effective between the dates of 08/29/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 2-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6

Item 2-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 2-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 2-3.4:



On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time. period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 2-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 2-3.6:

The Compliance Certification activity will be performed for the facility; The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: CR1

Emission Source: TKØ31

Emission Unit: 1-TANKS Process: CR1

Emission Unit: 1-TANKS Process: CR1

Emission Unit: 1-TANKS Process: CR1

Regulated Contaminant(s): CAS No: 0NY998-00-0 Emission Source: TK114

Emission Source: TK115

Emission Source: TNK32

Item 2-3.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC **OPERATIONS** Monitoring Description:

The following sources TK114, TK115, TK031, and TNK32 have the flexibility to be utilized as crude oil tanks. Although, at any one time only two of these sources can be utilized to store either gasoline or crude oil. The remaining two tanks will either be in distillate or ethanol service.

voc

The current emission profile or Potential To Emit (PTE) at the facility incorporporates the aforemetioned scenario. The facility has taken this cap to remain within this current emission profile.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: CRUDE OIL TANKS

Applies to:

Replace this condition with (see form):

1-RACKT, RPT 2-RACKR, RPR 3-RACKM, RPM & BSM

Facility-wide refined product throughput (gasoline, ethanol, blendstock, distillate, biodiesel) shall be limited to keep individual and total HAP emissions less than 9.5 tons/ yr and 23.75 tons/yr, respectively: that is, less than the applicability thresholds of 40 CFR 63, Subpart R. Refined product throughput shall also be limited to keep total VOC emissions below the applicability threshold of 6 NYCRR 231-6.

Upper Permit Limit: 1,928,300,000 gallons



Parameter Monitored: CRUDE OIL Upper Permit Limit: 2 tanks Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-3: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-3.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 4-3.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-3.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-3.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-3.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-3.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK3 3-RACKM Control Device: Process: R3C RPM, BSM, CDM Emission Source: VCUM2

Regulated Contaminant(s):		Marine VCU Minor Mod language
CAS No: 0NY998-00-0	VOC	replaced by language proposed in
CAS No: 0NY100-00-0	HAP	current application.

Item 4-3.7:

Compliance Certification shall include the following monitoring:

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description:

> The emission rate of the Marine Vapor Combustion Unit (VCUM2) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. This also absolves the facility from applicability from 6 NYCRR 231-6. The emission rate shall also be limited to keep total

VOC emissions below the applicability thresholds of

Facility wide emissions were determined using the most 6 NYCRR 231-6.

eurrent AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Vapor Combustion Unit (VCU) emission rate of 2 3 milligrams per liter.

^ The Marine VCU (VCUM2) will be operated at a maximum

The vapor combustion unit shall be tested with report submitted to Department within 180 days after initial notification of startup to determine if the vapor combustion unit achieves the 3 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 3 milligrams per liter 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION

Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period.

The initial report is due $\frac{1}{30}/2013$.

Subsequent reports are due every 12 calendar month(s).

Condition 1-4: **Capping Monitoring Condition** Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-4.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to

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the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 1-4.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 1-4.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-4.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-4.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 1-4.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

I-RACKTEmission Unit:I-RACK1Process:Emission Point:000010TRK1Emission Source:VRUTKControl Device:Regulated Contaminant(s):CAS No:0NY998-00-0VOC

HAP

Item 1-4.7:

Compliance Certification shall include the following monitoring:

CAS No: 0NY100-00-0

Capping: Yes

Monitoring Type: INTERMITTENT EMISSION TESTING WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description:

> The emission rate of the vapor recovery unit (VRUTK) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

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Facility wide emissions were determined using the most eurrent AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Truck Vapor Recovery Unit (VRUTK) will be operated at a maximum emission rate of 2 milligrams per liter.

The vapor recovery unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date to determine if the vapor recovery unit achieves the 2 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1.

Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due-1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-4: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-4.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 4-4.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-4.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations on law.

Item 4-4.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This



certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-4.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-4.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 Process: R1D

Emission Unit: 1-RACK

Emission Unit: 1-RACK3 Process: R3D

Emission Unit: 1-RACK4 Process: R4D

Regulated Contaminant(s): CAS No: 0NY100-00-0

Item 4-4.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Distillate oil throughput shall be limited to keep individual and total HAP emissions less than 9.5 tons/yr and 23.75 tons/yr, respectively; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP.

HAP

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values

Replace this condition with (see form):

Applies to: 1-TANK1, RP1, CR1, BS1

Tank maintenance emissions will not exceed 22 tons on a rolling annual basis.

Emissions will be calculated using the latest version of AP-42.

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which were approved by Central Office on 6/28/2012.

Distillate oil throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: DISTILLATES - NUMBER 1 AND NUMBER 2 OIL Upper Permit Limit: 229,300,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-5: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-5.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-5.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-5.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-5.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-5.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of

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the Act.

Item 4-5.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3C CDM Emission Unit: 3-RACKM Process: FGM

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-5.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Crude Oil throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This absolves the facility from that NESHAP. Also to cap out of Volathe Organic Compunds (VOC) in regards to 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values which were approved by Central Office on 6/28/2012.

This crude throughput alottment is useable during times when the Marine Vapor Combustion Unit (Source ID: VCUM2) is not operational.

In the event that VCUM2 is operable throughout the annual year this alottment can be converted to 50,000,000 gallons controlled through Source ID: VCUM2 for operational flexibility purposes.

Crude Oil throughputs shall be included in the annual

Add Crude Oil Alternate Operating Scenarios condition.



report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: CRUDE OIL Upper Permit Limit: 20,000,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-6: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-6.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-6.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 4-6.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-6.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-6.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-6.6:

The Compliance Certification activity will be performed for the facility:

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The Compliance Certification applies to:

1-RACKT Emission Unit: 1-RACK1 Process:-R1E RPT

Emission Unit: 1-RACK1 Process: R1G

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC CAS No: 0NY100-00-0 HAP

Item 4-6.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description: Refined Product Gasoline/Ethanol throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. The refined product throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

> Emissions for this cap were calculated using the most current version of eurrent AP-42 emission factors, "TANKS" program, or other eurrent emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of 10 milligrams per liter, and a Marine Vapor Combustion Unit (Control: VCUML) emission rate of 10 mg/l and another Marine Vapor Combustion Unit (Control: VCUM2) with an emssion rate of 3 mg/l. An Air Quality Impact Analysis was conducted to ensure that impacts from the facility remained below most recent updated DAR-1 AGC/SGC values which were approved by Central Office on 6/28/2012. with negative pressure loading (vac assist) to eliminate fugitive emissions from loading.

Refined product Gasoline/Ethanol throughputs shall be included in the

annual report. The process material selected is gasoline, however this limit applies to all refined products.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: GASOLINE, ETHANOL, DISTILLATE, BIODIESEL Upper Permit Limit: 639,583,333 gallons 879,300,000 Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).



Condition 1-7: Capping Monitoring Condition Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 1-7.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

40 CFR Part 63, Subpart R

Item 1-7.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.

Item 1-7.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 1-7.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 1-7.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 1-7.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

2-RACKR		
Emission Unit: 1-RACK2	Emission Point: 00002	0RRK1
Process: R2G RPR	Emission Source: VCUR Control Device:	R
Regulated Contaminant(s):		
CAS No: 0NY998-00-0	VOC	
CAS No: 0NY100-00-0	HAP	

Item 1-7.7:

Compliance Certification shall include the following monitoring:



Capping: Yes Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description: The emission rate of the Rail vapor combustion unit (VCURR) shall be limited to keep total HAP emissions below 23.75 tons/year and keep individual HAP emissions below 9.5 tons/year which is less than the applicability thresholds of 40 CFR 63, Subpart R. The emission rate shall also be limited to keep total VOC emissions below the applicability thresholds of Facility wide emissions were determined using the most 6 NYCRR 231-6 current AP-42 emission factors and "TANKS" program. The throughput limits were calculated using a Vapor Combustion Unit (VCU) emission rate of 2 10 milligrams per liter. VCURR will be operated at a maximum The vapor combustion unit shall be tested with report submitted to Department within 180 days after permit renewal issuance date to determine if the vapor combustion unit achieves the 10 milligrams per liter limit. The test shall be conducted in accordance with the procedures described in 6 NYCRR 202-1. Parameter Monitored: 40 CFR 60-63 - TOTAL ORGANIC COMPOUNDS (TOC) Upper Permit Limit: 10 milligrams per liter 2 milligrams per liter Reference Test Method: Method 25A or 25B, Method 21, Method 2A Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -

SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 4-7: Capping Monitoring Condition Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-7

Item 4-7.1:

Under the authority of 6 NYCRR Part 201-7, this condition contains an emission cap for the purpose of limiting emissions from the facility, emission unit or process to avoid being subject to the following applicable requirement(s) that the facility, emission unit or process would otherwise be subject to:

6 NYCRR Subpart 231-6 40 CFR Part 63, Subpart R

Item 4-7.2:

Operation of this facility shall take place in accordance with the approved criteria, emission limits, terms, conditions and standards in this permit.



Item 4-7.3:

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Item 4-7.4:

On an annual basis, unless otherwise specified below, beginning one year after the granting of an emissions cap, the responsible official shall provide a certification to the Department that the facility has operated all emission units within the limits imposed by the emission cap. This certification shall include a brief summary of the emissions subject to the cap for that time period and a comparison to the threshold levels that would require compliance with an applicable requirement.

Item 4-7.5:

The emission of pollutants that exceed the applicability thresholds for an applicable requirement, for which the facility has obtained an emissions cap, constitutes a violation of Part 201 and of the Act.

Item 4-7.6:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 3-RACKM Process: R3C CDM

Regulated Contaminant(s):	
CAS No: 0NY998-00-0	VOC
CAS No: 0NY100-00-0	HAP

Item 4-7.7:

Compliance Certification shall include the following monitoring:

Capping: Yes Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS Monitoring Description: Crude Oil throughput shall be limited to keep total HAP emissions less than 23.75 tons/yr and keep individual HAP emissions below 9.5 tons/year; that is, less than the applicability thresholds of 40 CFR 63, Subpart R. This

absolves the facility from that NESHAP. Crude oil throughput shall also be limited to keep total VOC emissions below the applicability thresholds of 6 NYCRR 231-6.

Emissions for this cap were calculated using the most current version of AP-42 emission factors, "TANKS" program, or other current emission factors. Throughput limits were calculated using a Truck Vapor Recovery Unit emission rate of 2 mg/l, a Rail Vapor Combustion Unit emission rate of



10 2 milligrams per liter, and a Marine Vapor Combustion
Unit (Control: VCUML) emission rate of 10 mg/l and another
Marine Vapor Combustion Unit (Control: VCUM2) with an
emssion rate of 3 2 mg/l, An Air Quality Impact Analysis
was conducted to ensure that impacts from the facility
remained below most recent updated DAR-1 AGC/SGC values
which were approved by Central Office on 6/28/2012.
and with negative pressure loading (vac assist) to eliminate fugitive emissions from loading.

Crude Oil throughputs shall be included in the annual report.

Work Practice Type: PROCESS MATERIAL THRUPUT Process Material: CRUDE OIL Upper Permit Limit: 1,800,000,000 gallons 450,000,000 gallons Monitoring Frequency: MONTHLY Averaging Method: ANNUAL TOTAL ROLLED MONTHLY Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 31: Notification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-1.2

Item 31.1:

A person who is required by the commissioner to submit a stack test report shall notify the commissioner, in writing, not less than 30 days prior to the test, of the time and date of the test. Such notification shall also include the acceptable procedures to be used to stack test including sampling and analytical procedures. Such person shall allow the commissioner, or his representative, free access to observe stack testing being conducted by such person.

Condition 32: Acceptable procedures Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 202-1.3 (a)

Item 32.1:

Emission testing, sampling and analytical determinations to ascertain compliance with this Subchapter shall be conducted in accordance with test methods acceptable to the commissioner. The Reference Methods contained in part 60, appendix A and part 61, appendix B of title 40 of the Code of Federal Regulations and all future technical revisions, additions or corrections made thereto shall be considered as acceptable test methods for those sources and contaminants for which they are expressly applicable, except where the commissioner has issued a specific method to be used instead of a Reference Method contained in these Federal regulations or where the commissioner determines that one or more alternate methods are also acceptable. The person who owns or operates an air contamination source shall submit the emission test report in triplicate, to the commissioner within 60 days after the completion of tests. In the event such source owner/operator can demonstrate to the commissioner such time is not sufficient, he may request in writing and be granted an extension. Where an opacity emission standard is applicable



to the source tested, the emission test report shall include the opacity observation.

Condition 1-8: Air pollution prohibited Effective between the dates of 08/10/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 211.1

Item 1-8.1:

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.



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Emission Unit: 1RACK3 Process: R3E

Item 34.2:

No person shall cause or allow emissions that exceed the applicable permissible emission rate as determined from Table 2, Table 3, or Table 4 of 6 NYCRR Part 212 for the environmental rating issued by the commissioner.

Condition 35: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 212.4 (a) 212-3.

Item 35.1;

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK3 Process: R3E

Emission Point: 00003 Emission Source: VCUMI

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 35.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The Volatile Organic Compound (VOC) shall be reduced by a weight percent greater than or equal to 90% to ensure compliance with the emission standard in Table 2.

The emission rate was figured with a maximum loading rate of 168,000 gallons/hr while using the emission factor from AP-42 of 3.9 lbs/ 1000 gallons loaded equals an emission rate of 655 lbs/hour uncontrolled therefore the aforementioned emission standard applies. This condition also satisfies 6 NYCRR 212.10 RACT control of 81% by weight reduction.

Parameter Monitored. VOC Lower Permit Limit: 90 percent by weight

Renewal 2/Mod 4/Active

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE AT ANY TIME Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

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Marine VCU Minor Mod language replaced by language proposed in current application.



Condition 4-8: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 212.10 (c) (4) (i)

Item 4-8.1:

The Compliance Certification activity will be performed for the Facility.

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 4-8.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Volatile organic compound emission points which are equipped with a capture system and a control device with an overall removal efficiency of at least 81 percent are equipped with reasonably available control technology.

Manufacturer Name/Model Number: John Zink Vapor Combustion Unit Parameter Monitored: VOC Upper Permit Limit: 81 percent by weight Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 36: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 225-1.2 (a) (2)

Item 36.1:

The Compliance Certification activity will be performed for the Facility.

Item 36.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

No person shall use, purchase, sell, or offer for sale any distillate fuel oil which has a sulfur content greater than the limit presented below. A log of the sulfur



content in oil per delivery must be maintained on site for a minimum of five years after the date of the last entry.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: DISTILLATES - NUMBER 1 AND NUMBER 2 OIL Parameter Monitored: SULFUR CONTENT Upper Permit Limit: 1.5 percent by weight Monitoring Frequency: PER DELIVERY Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB) Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 37: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 225-1.8 (b)

Item 37.1:

The Compliance Certification activity will be performed for the Facility.

Item 37.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Any person who sells oil and/or coal must retain, for at least three years, records containing the following information:

i. fuel analyses and data on the quantities of all oil and coal received; and

ii. the names of all purchasers, fuel analyses and data on the quantities of all oil and coal sold.

Such fuel analyses must contain as a minimum:

i. data on the sulfur content, ash content, specific gravity and heating value of residual oil;

ii. data on the sulfur content, specific gravity and heating value of distillate oil; and

iii. data on the sulfur content, ash content and heating value of coal.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)



Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 38: Sampling, compositing, and analysis of fuel samples Effective between the dates of 03/03/2011 and 03/02/2016

1.6

Applicable Federal Requirement:6 NYCRR 225-1.8-(d)

Item 38.1:

All sampling, compositing, and analysis of fuel samples, taken to determine compliance with 6 NYCRR Part 225-1, must be done in accordance with methods acceptable to the commissioner.

Condition 39: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 225-3.3 (a)

Item 39.1:

The Compliance Certification activity will be performed for the Facility.

Item 39.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: WORK PRACTICE INVOLVING SPECIFIC OPERATIONS

Monitoring Description:

Any gasoline sold or supplied to a retailer or wholesale purchaser-consumer, shall have a Reid vapor pressure (RVP) no greater than 9.0 pounds per square inch (psi), during the period May 1st through September 15th of each year. Sampling and testing will be done according to a protocol approved by the Department.

Work Practice Type: PARAMETER OF PROCESS MATERIAL Process Material: GASOLINE Parameter Monitored: REID VAPOR PRESSURE Upper Permit Limit: 9.0 pounds per square inch absolute Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: MAXIMUM - NOT TO BE EXCEEDED AT ANY TIME (INSTANTANEOUS/DISCRETE OR GRAB) Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2012. Subsequent reports are due every 12 calendar month(s).

Condition 40: Petroleum fixed roof tanks - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.1 (d) (2) (i)

Add condition for Crude monthly RVP sampling - see form

New York State Department of Environmental Conservation Permit ID: 4-0101-00112/00029



Facility DEC ID: 4010100112

Item 40.1:

This Condition applies to: 1-TANK1 Emission Unit: 1TANKS Process: GA1 RPM

Item 40.2:

The tank must be retrofitted with an internal floating roof or equivalent control.

Condition 41: Gasoline terminals - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement: 6 NYCRR 229.1 (d) (2) (iv)

Item 41.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Emission Unit: 1RACK2 2-RACKR

Item 41.2:

The gasoline vapor collection and control systems must capture gasoline vapors during loading and unloading of gasoline transport vehicles and must condense, absorb, adsorb, or combust the gasoline vapors so emissions do not exceed 0.67pounds per 1000 gallons of gasoline loaded or unloaded. Any equivalent control system is acceptable.

Condition 42: VOL storage tanks greater than 20,000 gallons - a Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.1 (d) (2) (v)

Item 42.1:

This Condition applies to:

Emission Unit: 1TANKS 1-TANK Process: ET1

Item 42.2:

The storage tank must be equipped with an internal floating roof with a liquid-mounted primary seal and gasket fittings or equivalent control. Replacement of other than liquid-mounted seals is to be performed when the tank is cleaned and gas-freed for other purposes.

Condition 43: Internal floating roofs required in fixed roof tanks storing petroleum products Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.3 (a)




Item 43.1: This Condition applies to:

> Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 43.2:

No person may store petroleum liquid in a fixed roof tank subject to 6 NYCRR Part 229 unless:

1. the tank has been retrofitted with an internal floating roof or equivalent control; and

2. the vapor collection and vapor control systems are maintained and operated in such a way as to ensure the integrity and efficiency of the system.

Condition 44: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 229.3 (d)

Item 44.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Item 44.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

The gasoline vapor collection and control systems must capture gasoline vapors during loading and unloading of gasoline transport vehicles and must condense, absorb, adsorb, or combust gasoline vapors so emissions do not exceed 0.67 pounds/1000 gallons.

Parameter Monitored: VOC Upper Permit Limit: 0.67 pounds per 1000 gallons Monitoring Frequency: PER DELIVERY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 45: VOL fixed roof storage tank requirements Effective between the dates of 03/03/2011 and 03/02/2016



Applicable Federal Requirement:6 NYCRR 229.3 (e) (1)

Item 45.1: This Condition applies to:

> Emission Unit: 1TANKS 1-TANK1 Process: ET1 BS1, CR1

Item 45.2:

For a fixed roof storage tank storing volatile organic liquids, the tank must be equipped with an internal floating roof with a liquid-mounted primary seal and gasket fittings or equivalent control. Replacement of other than liquid-mounted seals is to be performed when the tank is cleaned and gas-free for other purposes.

Condition 4-9: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 231-11.2 (c)

Item 4-9.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

3-RACKM Emission Unit: 1-RACK3	Emission Point: 00003
Process: FG3 FGM	Emission Source: RACK3
3-RACKM Emission Unit: 1-RACK3 Process: R3E RPM	Emission Point: 00003 Emission Source: RACK3
Emission Unit: 1-RACK3	Emission Point: 00003
Process: R3G	Emission Source: RACK3
1-TANK1	
Emission Unit: 1-TANKS	
Process: CR1	Emission Source: TK031
1-TANK1	
Emission Unit: 1-TANKS	
Process: CR1	Emission Source: TK114
1-TANK1	
Emission Unit: 1-TANKS	
Process: CR1	Emission Source: TK115
1-TANK1	
Emission Unit: 1-TANKS	TK032
Process: CR1	Emission Source: TNK32
Emission Unit: 1-TANKS	
Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS	
Process: ET1	Emission Source: TK114



Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1 RP1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1 RP1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1 RP1	TK039 Emission Source: TNK39

Item 4-9.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For a modification with a project emission potential which is less than 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, but equals or exceeds 50 percent of the applicable significant project threshold when emissions excluded in accordance with Clause 231-4.1(b)(40)(i)(c) of this Part are added, or for a modification with a project emission potential which equals or exceeds 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, the facility owner or operator must submit an application to modify the facility permit under the minor permit provisions of Subpart 201-6 of this Title or obtain a preconstruction permit under the provisions of Subpart 201-6 of this Title, and must:

(1) maintain the following information for a minimum of five years:

(i) a description of the modification.

(ii) an identification of each new or modified emission source(s) including the associated processes and emission unit.

(iii) the calculation of the project emission potential for each modified emission source(s) including supporting documentation. (iv) the date the modification commenced operation.

(2) monitor the emissions of each regulated NSR contaminant from the emission source(s) that will increase as a result of the modification, and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the change if the modification increases the design capacity of or potential to emit the regulated NSR contaminant at such emission source(s).

(3) submit a report to the department within 30 days after the end of each year during which records must be generated in accordance with Paragraph 231-11.2(c)(2) of this Part. The report must contain:

(i) the name, address, and telephone number of the major facility.

(ii) the annual emissions as calculated pursuant to Paragraph (c)(2) of this Section.

(iii) a comparison of actual annual emissions to the projected actual emissions and, if applicable, an explanation as to why the actual annual emissions exceeded the projected actual emissions.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 4-10: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:6 NYCRR 231-11.2 (c)

Item 4-10.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: 3-RACKM

Emission Unit: 1-RACK3 Process: FG3 FGM 3-RACKM Emission Unit: 1-RACK3 Process: R3C CDM

Emission Source: RACK3

RACK3 M Emissi

Emission Source: VCUM2

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3-RACKM Emission Unit:-1-RACK3 Process: R3C CDM

VCUM1 Emission Source: VCUML

Item 4-10.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For a modification with a project emission potential which is less than 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, but equals or exceeds 50 percent of the applicable significant project threshold when emissions excluded in accordance with Clause 231-4.1(b)(40)(i)(c) of this Part are added, or for a modification with a project emission potential which equals or exceeds 50 percent of the applicable significant project threshold in Table 3, Table 4 or Table 6 of Subpart 231-13 of this Part, the facility owner or operator must submit an application to modify the facility permit under the minor permit provisions of Subpart 201-6 of this Title or obtain a preconstruction permit under the provisions of Subpart 201-6 of this Title, and must:

(1) maintain the following information for a minimum of five years:

(i) a description of the modification.

(ii) an identification of each new or modified emission source(s) including the associated processes and emission unit.

(iii) the calculation of the project emission potential for each modified emission source(s) including supporting documentation.

(iv) the date the modification commenced operation.

(2) monitor the emissions of each regulated NSR contaminant from the emission source(s) that will increase as a result of the modification, and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the change if the modification increases the design capacity of or potential to emit the regulated NSR contaminant at such emission source(s).



(3) submit a report to the department within 30 days after the end of each year during which records must be generated in accordance with Paragraph 231-11.2(c)(2) of this Part. The report must contain:

(i) the name, address, and telephone number of the major facility.

(ii) the annual emissions as calculated pursuant to Paragraph (c)(2) of this Section.

(iii) a comparison of actual annual emissions to the projected actual emissions and, if applicable, an explanation as to why the actual annual emissions exceeded the projected actual emissions.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 12 calendar month(s).

Condition 46: EPA Region 2 address. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.4, NSPS Subpart A

Item 46.1:

This Condition applies to: 1-RACKT Emission Unit: 1RACK1 Emission Unit: 1TANKS 1-TANK1

Process: ET1 RP1 Emission Source: TK031 Emission Unit: 1TANKS 1-TANK1 Process: ET1 RP1 Emission Source: TK114

Emission Unit: 1TANKS 1-TANK1 Process: ET1 RP1 Emission Source: TK115

Emission Unit:1TANKS1-TANK1TK032Process:ET1RP1Emission Source:TNK32

Emission Unit: 1TANKS1-TANK1TK039Process: ET1RP1Emission Source: TNK39

Emission Unit: 1TANKS Process: GA1

Emission Source: TK114

These changes apply to all Subpart A conditions (Conditions 46 through 66). They should also apply to process BS1 and CD1.



Emission Unit: 1TANKS Process: GA1 Emission Source: TK115

Emission Unit: 1TANKS Process: GA1 Emission Source: TNK39

Item 46.2:

All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the following address:

Director, Division of Enforcement and Compliance Assistance USEPA Region 2 290 Broadway, 21st Floor New York, NY 10007-1886

Copies of all correspondence to the administrator pursuant to this part shall also be submitted to the NYSDEC Regional Office issuing this permit (see address at the beginning of this permit) and to the following address:

NYSDEC Bureau of Quality Assurance 625 Broadway Albany, NY 12233-3258

Condition 47: Modification Notification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(a), NSPS Subpart A

Item 47.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32

Emission Unit: 1TANKS Process: ET1 Emission

Emission Source: TNK39



Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 47.2:

Any owner or operator subject to 40 CFR Part 60 shall furnish the Administrator and this office with the following information:

- a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless the change is specifically exempted under 40 CFR Part 60. The notice shall be post marked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productivity capability of the facility before and after the change, and the expected completion date of the change. The Administrator and/or this Department may request additional information regarding the change.

Condition 48: Recordkeeping requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(b), NSPS Subpart A

Item 48.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS	



Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS	
Process: GA1	Emission Source: TNK39

Item 48.2:

Affected owners or operators shall maintain records of occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

Condition 49:	Compliance Certification
	Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(c), NSPS Subpart A

Item 49.1:

Emission Unit: 1-RACK1

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39

Item 49.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description: Affected owners or operators shall submit an excess



emissions report and/or a summary report form (as defined in 40 CFR 60.7(d)) semi-annually (or more frequently as required by the applicable Subpart or the Administrator), to the Administrator. These reports shall be post marked no later than 30 days after each six (6) month period (or as appropriate), and shall contain the following information:

1) the magnitude of excess emissions computed, any conversion factors used, the date and time of each occurrence, and the process operating time during the reporting period;

2) specific identification of each period of excess emissions that occur during startup, shutdown, or malfunction, where the nature, cause, and corrective action are provided for a malfunction;

3) the date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

4) when no excess emissions have occurred or when the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be provided in the report.

Monitoring Frequency: CONTINUOUS Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 50: Excess emissions report. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(d), NSPS Subpart A

Item 50.1: This Condition applies to:

Emission Unit: **1RACK1**

Emission Unit: 1TANKS Process: ET1

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS

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Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 50.2:

A summary report form, for each pollutant monitored, shall be sent to the Administrator in the form prescribed in Figure 1 of 40 CFR Part 60.7(d).

Condition 51: Monitoring frequency waiver. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(e), NSPS Subpart A

Item 51.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
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Emission Unit: 1TANKS Process: GA1 Emission Source: TNK39

Item 51.2: Notwithstanding the frequency of reporting requirements specified in

paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the conditions in 40 CFR 60.7(e) are met.

Condition 52: Facility files for subject sources. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(f), NSPS Subpart A

Item 52.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS	Emission Point: 00115
Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS	Emission Point: 00115
Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS	Emission Point: 00115
Process: ETT	Emission Source: TK115
Emission Unit: 1TANKS	Emission Point: 00115
Process: ETT	Emission Source: TNK32
Emission Unit: 1TANKS	Emission Point: 00115
Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS	Emission Point: 00115
Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS	Emission Point: 00115
Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS	Emission Point: 00115
Process: GAI	Emission Source: TNK39

Item 52.2:

The following files shall be maintained at the facility for all affected sources: all measurements, including continuous monitoring systems, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part, recorded in permanent form suitable for inspections. The file shall be maintained for at least two years following the date of such



measurements, reports, and records.

Condition 53: Notification Similar to State or Local Agency Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.7(g), NSPS Subpart A

Item 53.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 53.2:

If notification substantially similar to that in 40 CFR Part 60.7(a) is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of 40 CFR Part 60.7(a).

Condition 54: Performance testing timeline. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(a), NSPS Subpart A

Item 54.1: This Condition applies to:

Emission Unit: **IRACK1**

New York State Department of Environmental Conservation



Permit ID: 4-0101-00112/00029

Facility DEC ID: 4010100112

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 54.2:

Within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the facility, the owner or operator of the facility shall conduct performance testing and provide the results of such tests, in a written report, to the Administrator.

Condition 55: Performance test methods. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(b), NSPS Subpart A

Item 55.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS	
Process: ET1	Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32



Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 55.2:

Performance testing shall be conducted in accordance with the methods and procedures prescribed in 40 CFR 60 or by alternative methods and procedures approved by the Administrator.

Condition 56:	Required performance test information.
	Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(c), NSPS Subpart A

Item 56.1:

This Condition applies to:

Emission Unit: 1RACK1	
Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39
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Item 56.2:

Performance tests shall be conducted under such conditions specified by the Administrator, based upon representative performance data supplied by the owner or operator of the facility.

Condition 57: Prior notice. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(d), NSPS Subpart A

Item 57.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 57.2:

The owner or operator shall provide the Administrator with prior notice of any performance test at least 30 days in advance of testing.

Condition 58: Performance testing facilities. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(e), NSPS Subpart A

Item 58.1: This Condition applies to:

Renewal 2/Mod 4/Active



Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 58.2:

The following performance testing facilities shall be provided during all tests:

1) sampling ports adequate for tests methods applicable to such facility;

2) a safe sampling platform;

3) a safe access to the sampling platform; and

4) utilities for sampling and testing equipment.

Condition 59: Number of required tests. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.8(f), NSPS Subpart A

Item 59.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK031



Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 59.2:

Each performance test shall consist of three separate runs, at the specified duration required in the applicable test method. Compliance with all applicable standards shall be determined by using the arithmetic means of the results of the three runs.

Condition 60: Availability of information. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.9, NSPS Subpart A

Item 60.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32

Emission Unit: 1TANKS Process: ET1 Em

Emission Source: TNK39



Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 60.2:

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by 40 CFR Part 2.

Condition 61: Opacity standard compliance testing. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.11, NSPS Subpart A

Item 61.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 61.2:

The following conditions shall be used to determine compliance with the opacity standards:

1) observations shall be conducted in accordance with Reference Method 9, in



Appendix A of 40 CFR Part 60(or an equivalent method approved by the Administrator including continuous opacity monitors);

2) the opacity standards apply at all times except during periods of start up, shutdown, and malfunction; and

3) all other applicable conditions cited in section 60.11 of this part.

Condition 62: Compliance with Standards and Maintenance Requirements Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.11(d), NSPS Subpart A

Item 62.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 62.2:

At all times, including periods of startup, shutdown, and malfunction, owners and operators of this facility shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department and the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.



Condition 63: Circumvention. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.12, NSPS Subpart A

Item 63.1: This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 63.2:

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

Condition 64: Monitoring requirements. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.13, NSPS Subpart A

Item 64.1: This Condition applies to:



Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 64.2:

All continuous monitoring systems and devices shall be installed, calibrated, maintained, and operated in accordance with the requirements of section 60.13.

Condition 65: Modifications. Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.14, NSPS Subpart A

Item 65.1:

This Condition applies to:

Emission Unit: 1RACK1

Emission Unit: 1TANKS Process: ET1 Emissio

Emission Source: TK031

Emission Unit: 1TANKS Process: ET1

Emission Source: TK114

Emission Unit: 1TANKS Process: ET1

Emission Source: TK115

Emission Unit: 1TANKS Process: ET1

Emission Source: TNK32



Emission Unit: 1TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1TANKS Process: GA1	Emission Source: TNK39

Item 65.2:

Within 180 days of the completion of any physical or operational change (as defined in section 60.14), compliance with the applicable standards must be achieved.

Condition 66: Reconstruction Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.15, NSPS Subpart A

Item 66.1:

This Condition applies to:

Emission Unit: 1RACK1 Emission Unit: 1TANKS Process: ET1 Emission Source: TK031 **Emission Unit: 1TANKS** Process: ET1 Emission Source: TK114 Emission Unit: 1TANKS Process: ET1 Emission Source: TK115 **Emission Unit: 1TANKS** Process: ET1 **Emission Source: TNK32** Emission Unit: 1TANKS Process: ET1 Emission Source: TNK39 **Emission Unit: 1TANKS** Process: GA1 **Emission Source: TK114** Emission Unit: 1TANKS Process: GA1 Emission Source: TK115 **Emission Unit: 1TANKS** Process: GA1 Emission Source: TNK39



Item 66.2:

The following shall be submitted to the Administrator prior to reconstruction (as defined in section 60.15):

1) a notice of intent to reconstruct 60 days prior to the action;

2) name and address of the owner or operator;

3) the location of the existing facility;

4) a brief description of the existing facility and the components to be replaced;

5) a description of the existing air pollution control equipment and the proposed air pollution control equipment;

6) an estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility;

7) the estimated life of the facility after the replacements; and

8) a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

Condition 67: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.113b(a), NSPS Subpart Kb

Item 67.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114	Kb applies to Tanks 31, 32, 39, 114 & 115 for processes RP1, BS1 and CR1. This applies to all Kb conditions.
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115	
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39	

Item 67.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> The facility operator shall conduct the following testing and maintenance procedures on the internal floating roof VOC control system for an applicable storage vessel when storing gasoline:

(1) Visually inspect the internal floating roof, the



primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) Visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Department in the inspection report required by this rule in Sec. 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with Volatile Organic Liquid (VOL). In no event shall inspections conducted in accordance with this requirement occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in item (2).

(4) Notify the regional office in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by items (1) and (3)



of this section to afford the Department the opportunity to have an observer present. If the inspection required by item (3) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Department at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Department at least 7 days prior to the refilling.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 68: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.115b(a), NSPS Subpart Kb

Item 68.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS	



Process: GA1 Emission Source: TNK39

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 68.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The owner or operator shall keep a record of each inspection performed to monitor the condition of the internal floating roof. Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

After each inspection that finds holes or tears in the seal or seal fabric, defects in the internal floating roof, or other control equipment defects, a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel, the nature of the defects, and the type and date of each repair made.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 69: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.116b, NSPS Subpart Kb

Item 69.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-TANKS Process: ET1	Emission Source: TK031
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK114
Emission Unit: 1-TANKS Process: ET1	Emission Source: TK115
Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK32



Emission Unit: 1-TANKS Process: ET1	Emission Source: TNK39
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK114
Emission Unit: 1-TANKS Process: GA1	Emission Source: TK115
Emission Unit: 1-TANKS Process: GA1	Emission Source: TNK39

Item 69.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The facility shall maintain the following readily accessible records, for applicable storage vessels:

- records showing the dimension of the storage vessel

- an analysis showing the capacity of the storage vessel.

- a record of the Volatile Organic Liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below:

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar- month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference--see Sec. 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil



with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference--see Sec. 60.17); or
(iii) Measured by an appropriate method approved by the Administrator; or
(iv) Calculated by an appropriate method approved by the Administrator.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 70: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(b), NSPS Subpart XX

Item 70.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 70.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description:

> Emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter loaded. An initial performance test is required to demonstrate compliance with the emission limit for the vapor processing system.

Parameter Monitored: VOC Upper Permit Limit: 35.0 milligrams per liter Reference Test Method: 25a or 25b Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST



METHOD INDICATED Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 71: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(e), NSPS Subpart XX

Item 71.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 71.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:

1. The owner or operator shall obtain the vapor tightness documentation described in paragraph 60.505(b) of 40 CFR 60.500 Subpart XX for each gasoline tank truck which is to be loaded at the facility.

2. The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the facility.

3. The owner or operator shall cross-check each tank identification number recorded per item 2 above with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded.

4. The terminal owner or operator shall notify the owner or operator of each nonvapor-tight gasoline tank truck loaded at the facility within 1 week after the documentation cross-check (Item #3).

5. The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the facility until vapor tightness documentation for that tank is obtained.

In addition, the terminal owner or operator shall keep documentation of all notifications required under item 4



above on file at the terminal for at least 5 years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 72: Truck loading compatibility Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(f), NSPS Subpart XX

Item 72.1: This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Item 72.2:

Gasoline loading limited to trucks with vapor collection equipment which is compatible with the terminal vapor collection system.

Condition 73: Vapor collection connection required Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(g), NSPS Subpart XX

Item 73.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT

Item 73.2:

The terminal and tank truck vapor collection systems must be connected during gasoline loading.

Condition 74: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 60.502(i), NSPS Subpart XX

Item 74.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT

Item 74.2:

Compliance Certification shall include the following monitoring:

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Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE Monitoring Description:

No pressure-vacuum vent in the terminal vapor collection system shall begin to open at a pressure less than 4,500 pascals.

Parameter Monitored: PRESSURE Lower Permit Limit: 4,500 Pascals Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 75: Definition of an affected source Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11081(a), Subpart BBBBBB

Item 75.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1RACK2 2-RACKR Process: R2G RPR

Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 75.2:

The affected source to which subpart BBBBBB applies is each area source bulk gasoline terminal, pipeline breakout station, pipeline pumping station, and bulk gasoline plant as identified below:

1) A bulk gasoline terminal that is not subject to the control requirements of 40CFR63, Subpart R or 40CFR63, Subpart CC.

2) A pipeline breakout station that is not subject to the control requirements of 40CFR63, subpart R.



- 3) A pipeline pumping station.
- 4) A bulk gasoline plant.

Condition 76: Compliance date for an existing source Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11083(b), Subpart BBBBBB

Item 76.1:

This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1RACK2 2-RACKR Process: FE2 FGR

Emission Unit:-IRACK2 2-RACKR Process: R2G RPR

Emission Unit: 1TANKS 1-TANK1 Process: GA1 RP1

Item 76.2:

An existing affected source must comply with the standards of this subpart no later than January 10, 2011.

Condition 77: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11087, Subpart BBBBBB

Item 77.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: 1-TANK1 Emission Unit: 1-TANKS

Process: GA1 RP1

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 77.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:



A facility which owns or operates a gasoline storage tank subject to this subpart and having a capacity equal to or exceeding 75 cubic meters shall equip each internal floating roof gasoline storage tank according to the requirements in (0.112b(a)(1)), except for the secondary seal requirements under §60.112b(a)(1)(ii)(B) and the requirements in (0.112b(a)(1)(iv)). The facility shall comply with the requirements of subpart BBBBBB by the applicable dates specified in §63.11083, except that if a storage vessel with a floating roof is not meeting the requirements of §63.11087(a) it must be in compliance at the first degassing and cleaning activity after January 10, 2011 or by January 10, 2018, whichever is first. The facility must comply with the testing and monitoring requirements specified in §63.11092(e)(1). Finally, the facility shall submit the following information as required in 40 CFR Part 60.115b(a):

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of (60.112b(a)(1)) and (60.113b(a)(1)). This report shall be an attachment to the notification required by (60.7(a)(3)).

(2) Keep a record of each inspection performed as required by 60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 60.113b(a)(3)(i), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 61.112b(a)(1) or 60.113b(a)(3) and list each repair made.

These records are to be maintained for a minimum of 5

Renewal 2/Mod 4/Active



years.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 78: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11088, Subpart BBBBBB

Item 78.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 78.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> The owner and/or operator of a gasoline loading rack having a throughput of greater than or equal to 250,000 gallons/day, shall be subject to the following requirements:

a) Equip the loading rack(s) with a vapor collection
system designed to collect the TOC vapors displaced from cargo tanks during product loading; and
b) Reduce emissions of TOC to less than or equal to 80 mg/l of gasoline loaded into gasoline cargo tanks at the loading rack; and
c) Design and operate the vapor collection system to prevent any TOC vapors collected at one loading rack from passing to another loading rack; and
d) Limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in §60.502(e)-(j). For the purposes of this condition, the term "tank truck' as used in §60.502(e)-(j) means "cargo tank" as defined in subpart BBBBBB in §63.11100.



The facility shall comply with the requirements of subpart BBBBBB by the applicable dates specified in §63.11083.

The facility must comply with the testing and monitoring requirements specified in §63.11092(a).

The facility must keep records and submit reports as specified in §63.11094 and 11095.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 79: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11089, Subpart BBBBBB

Item 79.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Item 79.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> Each owner/operator of a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station subject to the provisions of subpart BBBBBB shall perform a monthly leak inspection of all equipment in gasoline service, as defined in §63.11100. For this inspection, detection methods incorporating sight, sound, and smell are acceptable.

> A log book shall be used and shall be signed by the owner or operator at the completion of each inspection. A section of the log book shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

> Each detection of a liquid or vapor leak shall be recorded

FINAL


in the log book. When a leak is detected, an initial attempt at repair shall be made as soon as practicable, but no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in §63.11089(d).

Delay of repair of leaking equipment will be allowed if the repair is not feasible within 15 days. The owner or operator shall provide in the semiannual report specified in §63.11095(b), the reason(s) why the repair was not feasible and the date each repair was completed.

The facility must comply with the requirements of subpart BBBBBB by the applicable dates in §63.11083.

The facility must submit the applicable notifications as required under §63.11093.

The facility must keep records and submit reports as specified in §63.11094 and 63.11095.

Monitoring Frequency: MONTHLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 80: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a), Subpart BBBBBB

Item 80.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 80.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: INTERMITTENT EMISSION TESTING Monitoring Description:

The owner and/or operator of a facility subject to the



emission standard in §63.11088 for gasoline loading racks must conduct a performance test on the vapor processing and collection systems according to either of the following methods;

- test methods and procedures in §60.503, except a reading of 500ppm shall be used to determine the level of leaks to be repaired under §60.503(b), or;

- alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

Upper Permit Limit: 80 milligrams per liter Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Averaging Method: AVERAGING METHOD AS PER REFERENCE TEST METHOD INDICATED Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 81: Waiver of new performance test requirement by complying with state rule Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a)(2), Subpart

BBBBBB

Item 81.1: This Condition applies to:

Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1RACK2 2-RACKR Process: R2G RPR

Item 81.2:

If the facility is operating a gasoline loading rack in compliance with 6 NYCRR Part 229.3(d)(1) which requires the loading rack to meet an emission limit of 80 mg/L of gasoline loaded, then the facility may submit a statement by a responsible official of the facility certifying the compliance status of the loading rack in lieu of the test required in §63.11092(a)(1).

Condition 82: Waiver of new testing requirement due to previous test conducted within 5 prior year period Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(a)(3), Subpart

BBBBBB



Item 82.1: This Condition applies to:

> Emission Unit: 1RACK1 1-RACKT Process: R1G RPT

> Emission Unit: 1RACK2 2-RACKR Process: R2G RPR

Item 82.2:

If the facility has conducted a performance test on the vapor processing and collection systems within 5 years prior to January 10, 2008, and the test is for the affected facility and is representative of current or anticipated operating processes and conditions, the facility may submit the results of such testing in lieu of the test required under (3.11092(a)(1)), provided the testing was conducted using the test methods and procedures in §60.503.

Should USEPA deem the prior test data unacceptable, the facility is still required to meet the requirement to conduct an initial performance test within 180 days of the applicable compliance date in §63.11083.

Condition 83: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), **NESHAP Subpart BBBBBB**

Item 83.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: RIG RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 83.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES hour rolling average. In the event of CEMS Monitoring Description:

For each performance test required under (63.11092(a)(1)), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the

Add condition for VRUTK continuous monitoring condition, 40 CFR 63.11092(b). See Form.

The Terminal will use a VRU with a Continuous Emissions Monitoring System (CEMS) capable of measuring organic compound concentration per 40 CFR 63.11092(b)(1)(i)(A). The average hydrocarbon outlet percent will be monitored to ensure it does not exceed a six hour average limit of 0.2 vol% propane (2000 ppm), which corresponds to the permitted limit of 2 mg/L. The averaging time is a six downtime, alternative monitoring parameters will be observed in accordance with 40 CFR 63.11092(b)(1)(i)(B).

Each calendar month the vapor collection system and vapor processing system shall be inspected during loading events for total organic compounds liquid or vapor leaks. For purposes of this paragraph, sight, sound or smell are acceptable inspection/detection methods. Each detection of a leak shall be recorded and the source of the leak repaired. FINAThis condition applies to VRUTK.

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carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to conduct annual testing of the carbon activity for the carbon in each carbon bed. Carbon activity shall be tested in accordance with the butane working capacity test of the American Society for Testing and Materials (ASTM) Method D 5228-92 (incorporated by reference, see §63.14), or by another suitable procedure as recommended by the manufacturer.

Monitoring Frequency: ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 84: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBBB

Item 84.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 84.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the



carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to conduct monthly measurements of the carbon bed outlet volatile organic compounds (VOC) concentration over the last 5 minutes of an adsorption cycle for each carbon bed, documenting the highest measured VOC concentration. Measurements shall be made using a portable analyzer, in accordance with 40CFR Part 60, Appendix A-7, EPA Method 21 for open-ended lines.

Reference Test Method: Method 21 Monitoring Frequency: MONTHLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 85: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('1'), NESHAP Subpart BBBBB

Item 85.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 85.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous monitoring



system (CMS) while gasoline vapors are displaced to the carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in §63.11092(b)(1)(i)(B) requires the owner/operator to monitor the vacuum level using a pressure transmitter installed in the vacuum pump suction line, with the measurements displayed on a gauge that can be visually observed. Each carbon bed shall be observed during one complete regeneration cycle on each day of operation of the loading rack to determine the maximum vacuum level achieved.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 86: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(i)('B')('2'), NESHAP Subpart BBBBBB

Item 86.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 86.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> For each performance test required under §63.11092(a)(1), the owner/operator shall determine a monitored operating parameter value for the vapor processing system. When the owner/operator chooses to use carbon adsorption as the vapor processing system, the owner/operator shall install, calibrate, certify, operate, and maintain, according to

These conditions should all be revised for CEMS with alternative monitoring as back up when CEMS is down. See application forms.



the manufacturer's specifications, a continuous monitoring system (CMS) while gasoline vapors are displaced to the carbon adsorption system.

As an alternative to installing a continuous emissions monitoring system (CEMS) as required in §63.11092(b)(1)(i)(A), the owner/operator must monitor the carbon adsorption devices as specified in §63.11092(b)(1)(i)(B).

One of the requirements in (3.11092(b)(1)(i)(B)) requires the owner/operator to develop and submit to NYSDEC a monitoring and inspection plan that describes the owner/operator's approach for meeting the following requirements:

1) The lowest maximum required vacuum level and duration needed to assure regeneration of the carbon beds shall be determined by an engineering analysis or from the manufacturer's recommendation and shall be documented in the monitoring and inspection plan.

2) The owner/operator shall verify, during each day of operation of the loading rack, the proper valve sequencing, cycle time, gasoline flow, purge air flow, and operating temperatures. Verification shall be through visual observation or through an automated alarm or shutdown system that monitors and records system operation.

3) The owner/operator shall perform semi-annual preventive maintenance inspections of the carbon adsorption system according to the recommendation of the manufacturer of the system.

4) The monitoring plan developed above shall specify conditions that would be considered malfunctions of the carbon adsorption system during the inspections of automated monitoring performed under items 1-3 above, describe specific corrective actions that will be taken to correct any malfunction, and define what the owner/operator would consider to be a timely repair for each potential malfunction.

5) The owner/operator shall document the maximum vacuum level observed on each carbon bed from each daily inspection and the maximum VOC concentration observed from each carbon bed on each monthly inspection as well as any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form of record. Such record shall also



include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 87: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11092(b)(1)(iii), Subpart

BBBBBB

Item 87.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2 2-RACKI	र
Process: R2G RPR	Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 87.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> For each performance test conducted under §63.11092(a)(1), the owner/operator must determine a monitored operating parameter value for any thermal oxidation system other than a flare using one of the following procedures:

(A) A continuous parameter monitoring system (CPMS) capable of measuring temperature shall be installed in the firebox or in the ductwork immediately downstream from the firebox in a position before any substantial heat exchange occurs.

(B) As an alternative, the facility may choose to meet the requirements listed below:

(1) The presence of a thermal oxidation system pilot flame shall be monitored using a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, installed in Add condition for Continuous Parameter Monitoring System for VCURR temperature monitoring with alternative monitoring as back up. See forms 40 CFR 63.11092(b).



proximity to the pilot light to indicate the presence of a flame.

(2) Develop and submit to NYSDEC a monitoring and inspection plan that describes the facility's approach for meeting the following requirements:

The thermal oxidation system shall be equipped to automatically prevent gasoline loading operations from beginning at any time that the pilot flame is absent.
The facility shall verify, during each day of operation of the loading rack, the proper operation of the assist-air blower, the vapor line valve, and the emergency shutdown system. Verification shall be through visual observation or through an automated alarm or shutdown system that monitors and records system operation.
The facility shall perform semi-annual preventive maintenance inspections of the thermal oxidation system according to the recommendations of the manufacturer of the system.

- The monitoring plan developed above shall specify conditions that would be considered malfunctions of the thermal oxidation system during the inspections or automated monitoring performed as stated above, describe specific corrective actions that will be taken to correct any malfunction, and define what the facility would consider to be a timely repair for each potential malfunction.

- The facility shall document any system malfunction, as defined in the monitoring and inspection plan, and any activation of the automated alarm or shutdown system with a written entry into a log book or other permanent form or record. Such record shall also include a description of the corrective action taken and whether such corrective actions were taken in a timely manner, as defined in the monitoring and inspection plan, as well as an estimate of the amount of gasoline loaded during the period of the malfunction.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: AS REQUIRED - SEE MONITORING DESCRIPTION

Condition 88: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(b), Subpart BBBBBB

Item 88.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FT1 FGT

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 88.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The facility shall keep records of the test results for each gasoline cargo tank loading at the facility as specified below:

1) Annual certification testing performed under §63.11092(f)(1) and periodic railcar bubble leak testing performed under §63.11092(f)(2).

2) The documentation file shall be kept up-to-date for each gasoline cargo tank loading at the facility. The documentation for each test shall include, as a minimum, the following information:

- Name of Test: Annual Certification Test - Method 27 or

Periodic Railcar Bubble Leak Test Procedure.

- Cargo tank owner's name and address
- Cargo tank identification number
- Test location and date
- Tester name and signature

- Witnessing inspector, if any: name, signature, affiliation

- Vapor tightness repair: Nature of repair work and when performed in relation to vapor tightness testing

- Test results: Test pressure, pressure or vacuum change, mm of water; time period of test; number of leaks found with instrument; and leak definition

3) If the facility is complying with the alternative requirements in §63.11088(b), the facility must keep records documenting that the facility has verified the vapor tightness testing according to the requirements of EPA.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 89: Compliance Certification



Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(c), Subpart BBBBBB

Item 89.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FT1 FGT

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 89.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in §63.11094(b), the facility may keep an electronic copy of each record which would be instantly available at the terminal. The copy of each record above must be an exact duplicate image of the original paper record with certifying signatures.

For facilities which use a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation must be made available (e.g., via facsimile) for inspection by EPA's or NYSDEC's delegated representatives during the course of a site visit, or within a mutually agreeable time frame.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 90: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(d), Subpart BBBBBB

Item 90.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 90.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

If the facility is subject to the equipment leak provisions of §63.11089, then the facility shall prepare and maintain a record describing the types, identification numbers, and locations of all equipment in gasoline service. For facilities electing to implement an instrument program under §63.11089, the record shall contain a full description of the program.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 91: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(e), Subpart BBBBBB

Item 91.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK2 2-RACKR Process:-FE2 FGR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 91.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:



If the facility is subject to the requirements for equipment leak inspections in §63.11089, then the facility shall record in the log book for each leak that is detected, the information below:

The equipment type and identification number.
 The nature of the leak (i.e., vapor or liquid) and the method of detection (i.e., sight, sound, or smell).
 The date the leak was detected and the date of each attempt to repair the leak.
 Repair methods applied in each attempt to repair the leak.
 "Repair delayed" and the reason for the delay if the leak is not repaired within 15 calendar days after discovery of the leak.

6) The expected date of successful repair of the leak if the leak is not repaired within 15 days.7) The date of successful repair of the leak.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 92: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11094(f), Subpart BBBBBB

Item 92.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT Emission Source: VRUTK

Emission Unit: 1-RACK2 2-RACKR Process:-R2G RPR

Emission Unit: <u>1-RACK2</u> 2-RACKR Process: R2G RPR Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 92.2:

Compliance Certification shall include the following monitoring:



Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

The facility shall keep the following records:

1) Keep an up-to-date, readily accessible record of the continuous monitoring data required under §63.11092(b) or §63.11092(e). This record shall indicate the time intervals during which loadings of gasoline cargo tanks have occurred or, alternatively, shall record the operating parameter data only during such loadings. The date and time of day shall also be indicated at reasonable intervals on this record.

2) Record and report simultaneously with the Notification of Compliance Status required under §63.11093(b) all data and calculations, engineering assessments, and manufacturer's recommendations used in determining the operating parameter value under §63.11092(b) or §63.11092(e).

3) Keep an up-to-date, readily accessible copy of the monitoring and inspection plan required under \$63.11092(b)(1)(i)(B)(2) or \$63.11092(b)(1)(iii)(B)(2).

4) Keep an up-to-date, readily accessible copy of all system malfunctions, as specified in §63.11092(b)(1)(i)(B)(2)(v) or §63.11092(b)(1)(iii)(B)(2)(v).

5) If the facility requests approval to use a vapor processing system or monitor an operating parameter other than those specified in §63.11092(b), the facility shall submit a description of planned reporting and recordkeeping procedures.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR)

Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 93: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11095(a), Subpart BBBBBB

Item 93.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:



Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK1 1-RACKT Process:-R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Emission Unit: 1-TANKS 1-TANK1 Process: GA1 RP1

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 93.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

Each facility with a bulk terminal or pipeline breakout station that is subject to control requirements of subpart BBBBBB shall include in a semiannual compliance report the following information, as applicable:

1) For storage vessels, if the facility is complying with options 2(a), 2(b), or 2(c) in table 1 of subpart BBBBBB, the informations specified in §60.115b(a), §60.115b(b), or §60.115b(c), depending upon the control equipment installed, or, if the facility is complying with option 2(d) in table 1 of subpart BBBBBB, the information specified in §63.1066.

2) For loading racks, each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility.

3) For equipment leak inspections, the number of equipment leaks not repaired within 15 days after detection.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 94: Compliance Certification



Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11095(b), Subpart BBBBBB

Item 94.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: FG1 FGT

Emission Unit: 1-RACK1 1-RACKT Process: R1G RPT

Emission Unit: 1-RACK2 2-RACKR Process: FE2 FGR

Emission Unit: 1-RACK2 2-RACKR Process: R2G RPR

Regulated Contaminant(s): CAS No: 0NY100-00-0 HAP

Item 94.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> A facility that is subject to the control requirements in Subpart BBBBBB, shall submit an excess emissions report to NYSDEC at the time the semiannual compliance report is submitted. Excess emissions events under subpart BBBBBB, and the information to be included in the excess emissions report, are as follows:

1) Each instance of a non-vapor-tight gasoline cargo tank loading at the facility in which the facility failed to take steps to assure that such cargo tank would not be reloaded at the facility before vapor tightness documentation for that cargo tank was obtained.

2) Each reloading of a non-vapor-tight gasoline cargo tank at the facility before vapor tightness documentation for that cargo tan is obtained by the facility in accordance with §63.11094(b).

3) Each exceedance or failure to maintain, as appropriate, the monitored operating parameter value determined under §63.11092(b). The report shall include the monitoring data for the days on which exceedances or failures to maintain have occurred, and a description and timing of the steps taken to repair or perform maintenance on the



vapor collection and processing systems or the continuous monitoring system.

4) Each instance in which malfunctions discovered during the monitoring and inspections required under §63.11092(b)(1)(i)(B)(2) and (b)(1)(iii)(B)(2) were not resolved according to the necessary corrective actions described in the monitoring and inspection plan. The report shall include a description of the malfunction and the timing of the steps taken to correct the malfunction.

5) for each occurrence of an equipment leak for which no repair attempt was made within 5 days or for which repair was not completed within 15 days after detection:

- the date on which the leak was detected;
- the date of each attempt to repair the leak;
- the reasons for the delay of repair; and
- the date of successful repair.

Monitoring Frequency: AS REQUIRED - SEE PERMIT MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period.

The initial report is due 7/30/2011.

Subsequent reports are due every 6 calendar month(s).

Condition 95: Applicability of MACT General Provisions Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40CFR 63.11098, Subpart BBBBBB

Item 95.1:

This Condition applies to:

Emission Unit:**IRACK1I-RACKT**Process:**FG1FGT**Emission Unit:**IRACK1I-RACKT**Process:**RPTI-RACKT**Emission Unit:**IRACK22-RACKR**Process:**FGR2-RACKR**Process:**FGR2-RACKR**Process:**RPR2-RACKR**Process:**RPR1-TANK1**Process:**GA1RP1**

Item 95.2:



Table 3 of subpart BBBBBB lists which parts of the general provisions in subpart A apply to the facility.

Condition 4-11: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 4-11.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

3-RACKM	Add process RPM	
Emission Unit: 1-RACK3 Process: R3C CDM	Emission Source: VCUM2	Marine VCU Minor Mod
3-RACKM Emission Unit: 1-RACK3 Process: R3C CDM	VCUM1 Emission Source: VCUML	proposed in current application.

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 4-11.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> Once each day, while the Vapor Combustion Unit (VCU) is operating, the permittee will inspect the VCU for proper operation. Proper operation is that the pilot is lit for loading operations and the Ultraviolet Flame detection equipment indicates the presence of a flame.

An excursion occurs if the product is being loaded without the pilot flame being lit.

The facility shall comply with 40 CFR 64.7 and 64.9.

Monitoring Frequency: PER DELIVERY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 6 calendar month(s).

Condition 4-12: Compliance Certification Effective between the dates of 11/07/2012 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 4-12.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: Add condition for continuous temperature monitor/MOPV for VCUM1 and VCUM2 to this condition. See separate forms (40 CFR Part 64).

Add condition for continuous temperature monitor/MOPV for VCURR to this condition. See form (40 CFR Part 64).



3-RACKM	
Emission Unit: 1-RACK3	
Process: R3C CDM	Emission Source: VCUM2
3-RACKM	
Emission Unit: 1-RACK3	VCUM1
Process: R3C CDM	Emission Source: VCUML
Regulated Contaminant(s):	

CAS No: 0NY998-00-0 VOC

Item 4-12.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

A third party contractor specializing in Vapor Combustion Unit (VCU) maintenance shall inspect and perform any necessary maintenance on the unit once every six months. The facility shall comply with 40 CFR 64.7 and 40 CFR 64.9. Records documenting the semi-annual maintenance occured shall be maintained in accordance with 6 NYCRR 201-6.5(c)(1) and (c)(2).

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 1/30/2013. Subsequent reports are due every 6 calendar month(s).

Condition 96: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 96.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

2-RACKR

Emission Unit: 1-RACK2	Emission Point: 00002 0RRK1
Process: R2E RPR	Emission Source: VCURR

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 96.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description:

> A third party contractor specializing in Vapor Combustion Unit (VCU) maintenance shall inspect and perform any necessary maintenance on the unit once every six months. The facility shall comply with 40 CFR 64.7 and 40 CFR



64.9. Records documenting the semi-annual maintenance occured shall be maintained in accordance with 6 NYCRR 201-6.5(c)(1) and (c)(2).

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 101: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 101.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK1 1-RACKT Process: RIE RPT Emission Source: VRUTK

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 101.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES

Monitoring Description:

A third party contractor, specializing in VRU maintenance, shall perform preventative maintenance once each-quarter semi-annual period. The facility shall comply with 40 CFR 64.7 and 64.9. Records documenting that the quarterly semi-annual maintenance occurred shall be maintained in accordance with 201-6.5(c)(1) and (c) (2).

Monitoring Frequency: QUARTERLY SEMI-ANNUAL Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 102: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 102.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to: CAM does not require a specific time frame for PM. 6B Requires semiannual.

*Combine Conditions 102 & 103. See notes on following pages.



1-RACKT

Emission Unit: 1-RACK1 Process: R1E RPT

Emission Point: 00001 0TRK1 Emission Source: VRUTK

Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 102.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Indicator 1: Temperature -- The temperature of the carbon bed will be monitored and recorded daily-during truck loading via a probe inserted in the carbon bed. If the temperature is between 150 175 and 200 degree F, a second temperature reading will be obtained during the next loading cycle of that carbon bed.

An excursion:

¹ If the the temperature exceeds 200 degree F during a loading cycle of either carbon bed, an excursion has occurred.

2 If the second temperature reading exceeds 150 1)' degree F,an excursion has occurred.

The facility shall comply with 40 CFR 64.7 and 64.9. Records shall be maintained in accordance with Part 201-6.5(c)(1) and (c)(2).

Parameter Monitored: TEMPERATURE Upper Permit Limit: 200 degrees Fahrenheit Monitoring Frequency: DAILY Averaging Method: MAXIMUM - NOT TO EXCEED STATED VALUE -SEE MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 103: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 103.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

1-RACKT

Emission Unit: 1-RACK1 Process: R1E **RPT** Emission Point: 00001 0TRK1 Emission Source: VRUTK A CEMS is used as the continuous monitoring parameter for CAM. Daily drift checks are performed automatically by the system. Daily drift checks are used to evaluate the CEM needs to be calibrated.

The following parameters will be monitored when the CEMS is not operational:



Regulated Contaminant(s): CAS No: 0NY998-00-0 VOC

Item 103.2:

Compliance Certification shall include the following monitoring:

Monitoring Type: MONITORING OF PROCESS OR CONTROL DEVICE PARAMETERS AS SURROGATE

Monitoring Description:

Indicator 2: Vacuum -- The facility will monitor the operating vacuum of each carbon bed during a regeneration cycle once per day and manually record the vacuum.

The greatest vacuum during one regeneration cycle of each bed shall be manually recorded based on the gauge reading. The duration of the reading shall be one complete cycle. If the recorded value for either bed is less than the limit, a second reading shall be collected during the course of the next regeneration cycle of the bed, approximately 30 minute cycle.

An excursion: occurs

If the operating vacuum of two consecutive regeneration cycles for a bed fails to attain at least $25\ 26$ in Hg during both regeneration cycles of the bed, an excursion has occurred.

The facility shall comply with 40 CFR 64.7 and 64.9. Records shall be maintained in accordance with Part 201-6.5 (c)(1) and (c)(2).

Parameter Monitored: VACUUM Lower Permit Limit: 25 26 inches of mercury Monitoring Frequency: DAILY Averaging Method: MINIMUM - NOT TO FALL BELOW STATED VALUE - SEE MONITORING DESCRIPTION Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 105: Compliance Certification Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:40 CFR Part 64

Item 105.1:

The Compliance Certification activity will be performed for the facility: The Compliance Certification applies to:

Emission Unit: 1-RACK2

Emission Point: 00002

Renewal 2/Mod 4/Active

Process: R2E	Emission Source: VCURR	
Regulated Contaminant(s): CAS No: 0NY998-00-0	VOC	
Item 105.2: Compliance Certification shall include the	e following monitoring:	Duplicate
Monitoring Type: RECORD KEEPING/Monitoring Description: A third party contractor spectrum of the	AAINTENANCE PROCEDURES reializing in Vapor Combustion nall inspect and perform any he unit once every six months. ith 40 CFR 64.7 and 40 CFR g the semi-annual maintenance l in accordance with 6 NYCRR	

Monitoring Frequency: SEMI-ANNUALLY Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

**** Emission Unit Level ****

Condition 106: Emission Point Definition By Emission Unit Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 106.1(From Mod 4):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK3 3-RACKM

Emission Point: 00003 0MDR1 Height (ft.): 36

Emission Point: 0MDR3

Diameter (in.): 72 NYTMN (km.): 4720.724 NYTME (km.): 601.833

Emission Point: 00006 0MDR2 Height (ft.): 36 Diameter (in.): 72 NYTMN (km.): 4720.645 NYTME (km.): 602.056

Item 106.2(From Mod 4):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK4

Emission Point: 00005



 Height (ft.): 36
 Diameter (in.): 72

 NYTMN (km.): 4720.645
 NYTME (km.): 602.056

Item 106.3(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK1 1-RACKT

Emission Point: 00001 0TRK1 Height (ft.): 19 Diameter (in.): 12 NYTMN (km.): 4720.691 NYTME (km.): 602.067

Item 106.4(From Mod 1):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-RACK2 2-RACKR

Emission Point: 00002 0RRK1 Emission Point: 0RRK2 Height (ft.): 37 Diameter (in.): 90 NYTMN (km.): 4720.358 NYTME (km.): 601.86

Item 106.5(From Mod 2):

The following emission points are included in this permit for the cited Emission Unit:

Emission Unit: 1-TANKS 1-TANK1 Emission Point: 00114 0T114 Height (ft.): 48 Diameter (in.): 81 1,440 NYTMN (km.): 4720.724 NYTME (km.): 601.833 Emission Point: 00115 0T115 Height (ft.): 48 Diameter (in.): 81 1,800 NYTMN (km.): 4720.724 NYTME (km.): 601.833 Emission Point: 00117 0T117 Height (ft.): 48 Diameter (in.): 81 1,320 NYTMN (km.): 4720.724 NYTME (km.): 601.833 Emission Point: 00118 0T118 Height (ft.): 48 Diameter (in.): 63 1,200 NYTMN (km.): 4720.675 NYTME (km.): 601.694 Emission Point: 00119 0T119 Height (ft.): 48 Diameter (in.): 57 960 NYTMN (km.): 4720.654 NYTME (km.): 601.762 Emission Point: 00120 0T120 Diameter (in.): 57 960 Height (ft.): 48 NYTMN (km.): 4720.601 NYTME (km.): 601.924 Emission Point: 00121 0T121 Height (ft.): 48 Diameter (in.): 81 1,800

Emission Point: 0TRK2



 NYTMN (km.): 4720.724
 NYTME (km.): 601.833

 Emission Point:
 00130

 Height (ft.): 48
 Diameter (in.): 81 900

 NYTMN (km.): 4720.551
 NYTME (km.): 602.053

 Emission Point:
 00T31

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Diameter (in.):
 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 Emission Point:
 00T32

 Height (ft.): 45
 Diameter (in.): 78 1,500

 NYTMN (km.):
 4720.645

 NYTME (km.):
 602.056

Height (ft.): 48 45	Diameter (in.): 78 1,500
NYTMN (km.): 4720.645	NYTME (km.): 602.056

Condition 107: Process Definition By Emission Unit Effective between the dates of 03/03/2011 and 03/02/2016

Applicable Federal Requirement:6 NYCRR Subpart 201-6

Item 107.1(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

 Emission Unit:
 1-RACK1

 Process: R1D
 Source Classification Code: 4-04-001-50

 Process Description: Emissions from Rack 1 while loading distillate.

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.2(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit:1-RACK11-RACKTProcess:R1EFGTSource Classification Code: 4-06-002-984-04-001-51Process Description:Emissions from ethanol loading at Rack 1. Fugitive emissions from loading trucks at Truck Rack.

Emission Source/Control: VRUTK - Control VACTK - Control Control Type: VAPOR RECOVERY SYS(INCL: Control Type: Vac Assist Vapor Reduction System CONDENSERS, HOODING, OTHER ENCLOSURES) RACKT Emission Source/Control: RACK1 - Process

Emission Source/Control: RACKI - Process Design Capacity: 888,300,000 gallons per year

Item 107.3(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit:1-RACK1Process:RPTSource Classification Code:4-04-001-53

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Process Description: from loading refined products into trucks at Truck Rack. Emissions associated with loading gasoline/ethanol at Rack 1.

Emission Source/Control: VRUTK - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES)

RACKT

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.4(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR Emission Unit: 1-RACK2 Process: R2D RPR Source Classification Code: 4-04-001-50 4-04-001-53 Process Description: Emissions associated with loading distillate at Rack 2. refined product into rail cars at Rail Rack. RACKR Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.5(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: <u>1-RACK3</u> 2-RACKR Process: FG3 FGR Source Classification Code: 4-04-001-51 Process Description: Emissions associated with fugitive emissions from loading rail cars at Rail Rack. Fugitive HAP/VOC emissions from Rack 3 and associated piping. RACKR Emission Source/Control: VACRR

Emission Source/Control: RACK3 - Process

Item 107.6(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit:1-RACK33-RACKMProcess:-R3CRPMSource Classification Code: 4-06-002-98Process Description:Source Classification Code: 4-06-002-98

Emissions associated with loading crude oil at marine from loading refined products into marine vessels. loading dock.

Control Type: Vac Assist Vapor Reduction System

Emission Source/Control: VCUM2 - Control Control Type: THERMAL OXIDATION VCUM1

Emission Source/Control: VCUML - Control Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR COLLECTION AND COMBUSTION UNIT)

RACKM

Emission Source/Control: RACK3 - Process

Item 107.7(From Mod 4):



This permit authorizes the following regulated processes for the cited Emission Unit: 3-RACKM Emission Unit: 1-RACK3 Process: R3D FGM Source Classification Code: 4-04-001-50 4-04-001-51 **Process Description:** Emission associated with loading marine vessels with distillate at Rack 3. fugitive emissions from loading marine vessels at dock. RACKM Emission Source/Control: VACMD - Control Emission Source/Control: RACK3 - Process Control Type: Vac Assist Vapor Reduction System Item 107.8(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: 3-RACKM Emission Unit: 1-RACK3 Process: R3E BSM Source Classification Code: 4-06-002-98 Process Description: Marine loading of ethanol at Rack 3. Emissions from loading blendstock into marine vessels. Emission Source/Control: VCUM2 - Control Emission Source/Control: VCUML - Control VCUM1 Control Type: Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR COLLECTION AND COMBUSTION UNIT) Marine VCU Minor Mod language RACKM Emission Source/Control: RACK3 - Process replaced by language proposed in current application. Item 107.9(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: Emission Unit: 1-RACK3 3-RACKM Process: R3G CDM Source Classification Code: 4-06-002-98 Process Description: Marine loading of gasoline at Rack 3. Emissions from loading crude oil into marine vessels. VCUM1 Emission Source/Control: VCUML - Control Emission Source/Control: VCUM2 - Control Control Type: VAPOR COMBUSTION SYSTEM (INCL VAPOR Control Type: COLLECTION AND COMBUSTION UNIT) RACKM Marine VCU Minor Mod language Emission Source/Control: RACK3 - Process replaced by language proposed in current application. Item 107.10(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: 1-FUGTV Emission Unit: 1-RACK4 Process: FG4 FUG Source Classification Code: 4-04-001-51 Process Description: Emissions associated with HAP/VOC from Rack 4 and Facility-wide emissions from pumps, valves, flanges, and misc appurtenances. associated components. FUGTV Emission Source/Control: RACK4 - Process Item 107.11(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit: Emission Unit: 1-RACK4 Process: R4D Source Classification Code: 4-04-001-51

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Process Description:

Emissions associated with distillate loading for additional rail spur.

Emission Source/Control: RACK4 - Process

Item 107.12(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit: 1-TANK1

Emission Unit: 1-TANKS Process: CR1 Source Classification Code: 4-03-010-99 Process Description: Crude Oil Storage Tanks used for storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF

Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK31C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK32C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK031 - Process Design Capacity: 3,829,140 gallons 4,200,000

Emission Source/Control: TK114 - Process



Design Capacity: 3,715,740 gallons 3,887,898 Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons 5,851,902 Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons 3,028,032 Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons 2,426,550 Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons 1,619,268 Emission Source/Control: TK120 - Process Design Capacity: 1,364,748 gallons 1,640,940 Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons 5,370,204 Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons 1,512,714 TK032 Emission Source/Control: TNK32 - Process Design Capacity: 3,829,140 gallons 4,200,000 TK039 Emission Source/Control: TNK39 - Process Design Capacity: 139,344,878 gallons 4,200,00

Item 107.13(From Mod 4): This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-TANKS 1-TANK1 Process: ET1 RP1 Source Classification Code: 4-03-010-99 Process Description: Refined product Ethanol storage tanks used for the storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF



Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK31C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK32C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK031 - Process Design Capacity: 3,829,140 gallons

Emission Source/Control: TK114 - Process Design Capacity: 3,715,740 gallons

Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons

Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons

Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons

Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons

Emission Source/Control: TK120 - Process Design Capacity: 1,364,748 gallons

Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons

Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons TK032 Emission Source/Control: TNK32 - Process Design Capacity: 3,829,140 gallons TK039 Emission Source/Control: TNK39 - Process

Design Capacity: 139,344,878 gallons



Item 107.14(From Mod 4):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-TANKS 1-TANK1 Process: GA1 BS1 Source Classification Code: 4-04-001-60 4-03-101-99 Process Description: Blendstock Gasoline storage tanks used for storage and distribution at terminal.

Emission Source/Control: T039C - Control Control Type: FLOATING ROOF

Emission Source/Control: T114C - Control Control Type: FLOATING ROOF

Emission Source/Control: T115C - Control Control Type: FLOATING ROOF

Emission Source/Control: T117C - Control Control Type: FLOATING ROOF

Emission Source/Control: T118C - Control Control Type: FLOATING ROOF

Emission Source/Control: T119C - Control Control Type: FLOATING ROOF

Emission Source/Control: T120C - Control Control Type: FLOATING ROOF

Emission Source/Control: T121C - Control Control Type: FLOATING ROOF

Emission Source/Control: T130C - Control Control Type: FLOATING ROOF

Emission Source/Control: TK114 - Process Design Capacity: 3,715,740 gallons

Emission Source/Control: TK115 - Process Design Capacity: 5,812,800 gallons

Emission Source/Control: TK117 - Process Design Capacity: 2,717,148 gallons

Emission Source/Control: TK118 - Process Design Capacity: 1,963,290 gallons

Emission Source/Control: TK119 - Process Design Capacity: 1,292,886 gallons

Emission Source/Control: TK120 - Process



Design Capacity: 1,364,748 gallons

Emission Source/Control: TK121 - Process Design Capacity: 4,603,536 gallons Add CR1 per emission unit matrix. Same sources and controls as RP1.

Emission Source/Control: TK130 - Process Design Capacity: 1,421,868 gallons TK039

Emission Source/Control: TNK39 - Process Design Capacity: 139,344,878 gallons

Item 107.15(From Mod 1):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-RACK1 Process: FG1 FGT Source Classification Code: 4-04-001-51 Process Description: Fugitive HAP/VOC emissions from Rack 1 and associated piping. RACKT

Emission Source/Control: RACK1 - Process Design Capacity: 888,300,000 gallons per year

Item 107.16(From Mod 1):

This permit authorizes the following regulated processes for the cited Emission Unit: 1-RACKT

Emission Unit: 1-RACK1 Process: FT1 FGT Source Classification Code: 4-04-001-54 Process Description: Fugitive truck emissions while loading products. RACKT

Emission Source/Control: TRUC1 - Process

Item 107.17(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

Emission Unit: 1-RACK2 Process: FE2 FGR Source Classification Code: 4-04-001-51 Process Description: Fugitive VOC/HAP emmisions from Rack 2 and associated piping. RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.18(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR Emission Unit: 1-RACK2 Process: R2E RPR Source Classification Code: 4-06-002-98 Process Description: Emissions while loading ethanol in railcars (Rack 2). These need to be modified per the permit matrix. Add 1-FUGTV for facility wide fugitives, FGT, FGR and FGM are fugitives associated with loading only.



Emission Source/Control: VCURR - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES) RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.19(From Mod 3):

This permit authorizes the following regulated processes for the cited Emission Unit:

2-RACKR

Emission Unit: 1-RACK2 Process: R2G RPR Source Classification Code: 4-04-001-53 Process Description: Emissions associated with loading gasoline/ethanol at Rack 2.

Emission Source/Control: VCURR - Control Control Type: VAPOR RECOVERY SYS(INCL. CONDENSERS,HOODING, OTHER ENCLOSURES)

RACKR

Emission Source/Control: RACK2 - Process Design Capacity: 840,000,000 gallons per year

Item 107.20(From Mod 0):

This permit authorizes the following regulated processes for the cited Emission Unit:

 I-TANK1

 Emission Unit:
 I-TANKS

 Process:
 IFG PCW
 Source Classification Code: 4-07-999-97

 Process Description:
 Emissions associated with wastewater tank contaminated with gasoline and distillates.

Emission Source/Control: 1WATR - Process Design Capacity: 1,307,796 gallons 1,512,714 Tank 130 is now in this Emission Unit only.



STATE ONLY ENFORCEABLE CONDITIONS **** Facility Level ****

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS This section contains terms and conditions which are not federally enforceable. Permittees may also have other obligations under regulations of general applicability

Item A: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

STATE ONLY APPLICABLE REQUIREMENTS

The following conditions are state applicable requirements and are not subject to compliance certification requirements unless otherwise noted or required under 6 NYCRR Part 201.

Condition 108:	Contaminant List	
	Effective between the dates of	03/03/2011 and 03/02/2016

Applicable State Requirement:ECL 19-0301

Item 108.1:

Emissions of the following contaminants are subject to contaminant specific requirements in this permit(emission limits, control requirements or compliance monitoring conditions).

CAS No: 000064-17-5 Name: ETHYL ALCOHOL (ETHANOL)



CAS No: 001634-04-4 Name: METHYL TERTBUTYL ETHER

CAS No: 0NY100-00-0 Name: HAP

CAS No: 0NY998-00-0 Name: VOC

Condition 109: Compliance Demonstration Effective between the dates of 03/03/2011 and 03/02/2016

Applicable State Requirement: ECL 19-0301 (3) (b)

Item 109.1:

The Compliance Demonstration activity will be performed for the Facility.

Regulated Contaminant(s): CAS No: 001634-04-4 METHYL TERTBUTYL ETHER

Item 109.2:

Compliance Demonstration shall include the following monitoring:

Monitoring Type: RECORD KEEPING/MAINTENANCE PROCEDURES Monitoring Description: Methyl-tertiary butyl ether (MTBE) shall not be used as a gasoline additive.

Monitoring Frequency: PER BATCH OF PRODUCT/RAW MATERIAL CHANGE

Reporting Requirements: SEMI-ANNUALLY (CALENDAR) Reports due 30 days after the reporting period. The initial report is due 7/30/2011. Subsequent reports are due every 6 calendar month(s).

Condition 110: Unavoidable noncompliance and violations Effective between the dates of 03/03/2011 and 03/02/2016

Applicable State Requirement:6 NYCRR 201-1.4

Item 110.1:

At the discretion of the commissioner a violation of any applicable emission standard for necessary scheduled equipment maintenance, start-up/shutdown conditions and malfunctions or upsets may be excused if such violations are unavoidable. The following actions and recordkeeping and reporting requirements must be adhered to in such circumstances.

(a) The facility owner and/or operator shall compile and maintain records of all equipment maintenance or start-up/shutdown activities when they can be expected to result in an exceedance of any applicable emission standard, and shall submit a report of such activities to the commissioner's representative when requested to do so in writing or when so required by a condition of a permit issued for the corresponding air contamination source except where conditions elsewhere in this permit which contain more stringent reporting and notification



provisions for an applicable requirement, in which case they supercede those stated here. Such reports shall describe why the violation was unavoidable and shall include the time, frequency and duration of the maintenance and/or start-up/shutdown activities and the identification of air contaminants, and the estimated emission rates. If a facility owner and/or operator is subject to continuous stack monitoring and quarterly reporting requirements, he need not submit reports for equipment maintenance or start-up/shutdown for the facility to the commissioner's representative.

(b) In the event that emissions of air contaminants in excess of any emission standard in 6 NYCRR Chapter III Subchapter A occur due to a malfunction, the facility owner and/or operator shall report such malfunction by telephone to the commissioner's representative as soon as possible during normal working hours, but in any event not later than two working days after becoming aware that the malfunction occurred. Within 30 days thereafter, when requested in writing by the commissioner's representative, the facility owner and/or operator shall submit a written report to the commissioner's representative describing the malfunction, the corrective action taken, identification of air contaminants, and an estimate of the emission rates. These reporting requirements are superceded by conditions elsewhere in this permit which contain reporting and notification provisions for applicable requirements more stringent than those above.

(c) The Department may also require the owner and/or operator to include in reports described under (a) and (b) above an estimate of the maximum ground level concentration of each air contaminant emitted and the effect of such emissions depending on the deviation of the malfunction and the air contaminants emitted.

(d) In the event of maintenance, start-up/shutdown or malfunction conditions which result in emissions exceeding any applicable emission standard, the facility owner and/or operator shall take appropriate action to prevent emissions which will result in contravention of any applicable ambient air quality standard. Reasonably available control technology, as determined by the commissioner, shall be applied during any maintenance, start-up/shutdown or malfunction condition subject to this paragraph.

(e) In order to have a violation of a federal regulation (such as a new source performance standard or national emissions standard for hazardous air pollutants) excused, the specific federal regulation must provide for an affirmative defense during start-up, shutdowns, malfunctions or upsets.

Condition 1-9: Visible Emissions Limited Effective between the dates of 08/10/2011 and 03/02/2016

Applicable State Requirement:6 NYCRR 211.2

Item 1-9.1:

Except as permitted by a specific part of this Subchapter and for open fires for which a restricted burning permit has been issued, no person shall cause or allow any air contamination source to emit any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.


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