

Statement of Basis

Final

**Sinclair Transportation Company
Burley Products Terminal
Burley, Idaho
Facility ID No. 031-00026
Permit to Construct P-2010.0033**

**June 9, 2010
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Permit Writer**

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
Btu	British thermal units
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
HAP	hazardous air pollutants
hr/yr	hours per year
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PAH	polyaromatic hydrocarbons
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
SO _x	sulfur oxides
T/yr	tons per consecutive 12-calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
TM	Universal Transverse Mercator
VOC	volatile organic compounds
yd ³	cubic yards
µg/m ³	micrograms per cubic meter

FACILITY INFORMATION

Description

The Sinclair Burley Products Terminal receives, stores and distributes petroleum products. The facility was constructed in 1950 and receives petroleum products from the Chevron pipeline (which originates in Salt Lake City, Utah) and stores the petroleum products on-site in any of ten petroleum product storage tanks. There is also one transmix storage tank which is used to store "slop oil" and one prover tank which is used for flow meter calibration. From tankage, the petroleum products are dispensed into carriers, primarily tank trucks, through a two bay loading rack system. Various additives may be blended with the petroleum products prior to dispensing. The carrier then distributes the petroleum products to gas stations, truck stops, airports, farms, etc.

Petroleum products enter the facility from the pipeline and are directed to the tank farm for storage. The tank farm consists of four gasoline storage tanks, three distillate oil storage tanks and a transmix storage tank. The four gasoline storage tanks are external floating roof type and may be used to store any grade of gasoline (i.e. regular unleaded, premium unleaded, etc.) as well as lower vapor pressure petroleum products. The three distillate oil storage tanks are fixed roof type and may be used to store any grade of distillate fuel oil (i.e. #2 fuel oil, #1 fuel oil, etc.). The transmix storage tank is fixed roof type and is used to store any grade of gasoline as well as lower vapor pressure petroleum products. The contents of the transmix tank are evacuated with a vacuum truck.

Sinclair is proposing to add ethanol loading/blending at the Burley Products Terminal and to add a thermal oxidizer on the loading racks. Additional equipment will include (3) three 19,200 gallon fixed roof ethanol storage tanks, a John Zink thermal oxidizer, a 1,000 gallon supplemental fuel tank (propane as supplemental fuel for the thermal oxidizer), and a 20 HP gear driven electric pump for transfer to the new tanks.

The facility is equipped with a two bay, bottom loading rack system for loading petroleum products into tank trucks or other type carriers. When a carrier arrives at the facility, it is directed to one of the loading rack bays where one (or several) of the loading rack arms are attached. Petroleum products are pumped from the tank farm to the loading rack system via a manifolded piping/pump arrangement. Various gasoline and distillate oil additives may be blended into the petroleum products via an in-line blending system. During the filling operation, displaced vapors from the carrier are vented through the vapor collection system and are combusted in a John Zink thermal oxidizer. Filling of the carrier continues until the desired quantity of product has been transferred. Upon completion of the filling operation, the carrier is disconnected from the loading rack system and exits the facility.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

February 21, 2007	T2-2007.0172, Facility Wide Tier II Permit, Permit status (A, but will become S upon issuance of this permit)
May 7, 2007	T1-2007.0203, Tier I Operating Permit (A, but will be canceled upon issuance of this permit)

Application Scope

This PTC is for a modification at an existing facility.

The applicant has proposed to:

- Reduce the potential to emit below Tier I major facility thresholds and cancel their Tier I operating permit.
- Add ethanol storage and loading capabilities including adding three 19,200 gallon ethanol storage tanks and adding the necessary piping and pumping.

- Reduce emissions from the loading rack by adding a John Zink thermal oxidizer.
- Commence construction prior to permit issuance in accordance with IDAPA 58.01.01.213.

Application Chronology

March 3, 2010	DEQ received an application and an application fee.
March 8 – March 23, 2010	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
March 19, 2010	DEQ approved pre-permit construction.
April 1, 2010	DEQ determined that the application was complete.
April 5, 2010	DEQ received supplemental information from the applicant.
May 26, 2010	DEQ made available the draft permit and statement of basis for peer and regional office review.
June 1, 2010	DEQ made available the draft permit and statement of basis for applicant review.
June 22, 2010	DEQ received the permit processing fee.
June 28, 2010	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

ID No.	Source Description	Control Equipment Description	Emissions Point ID No. and Description
301, 304, 311, & 321	<u>Tank 301, Tank 304, Tank 311, Tank 321</u> Type: Mechanical shoe external floating roof Rated capacity: 840,000 gallons Gasoline Storage	External Floating Roof	Not Modeled
302, 305, & 306	<u>Tank 302, Tank 305, Tank 306</u> Rated capacity: 840,000 gallons, Diesel Storage	Fixed Roof	Not Modeled
400, 401, & 402	<u>Tank 400, 401, 402</u> Rated capacity: 19,200 gallons, Ethanol Storage	Fixed Roof	Not Modeled
NA	<u>Prover Tank</u> Rated capacity: 735 gallons, Gasoline/Diesel	Fixed Roof	Not Modeled
NA	<u>Transmix Tank</u> Rated capacity: 6,000 gallons, Off-spec products, water contaminated with petroleum	Fixed Roof	Not Modeled
NA	Gasoline and distillate fuel loading rack Type: Two-bay, bottom-loading	Thermal Oxidizer	Exit height: 35 ft. Exit diameter: 6.6 ft Exit flow rate: 11,808 acfm Exit temperature: 1,000 °F (These data provided by the applicant are not included in the permit.)

Emissions Inventories

Sinclair provided an emission inventory for three new 19,200 gallon ethanol storage tanks and for the new loading rack thermal oxidizer. Summaries of Sinclair's pre and post project emission inventories are provided in Table 2 through Table 4.

The existing facilities potential to emit, or pre-project potential to emit, is based on an emission inventory provided by Sinclair on May 16, 2003. This emission inventory is the basis for the issuance October 23, 2007 Tier II Operating Permit and the May 7, 2007 Tier I Operating Permit.

The emission inventory for the proposed loading rack thermal oxidizer is based on the thermal oxidizer destroying 95% of the VOCs emitted from the existing loading rack operations while processing diesel fuel and based on emissions of 35 mg/l while processing gasoline.

Pre-Project Potential to Emit

The following table presents the pre-project potential to emit for all criteria pollutants from all existing emissions units as submitted by the Applicant and verified by DEQ staff in previous permit actions. See the emission inventory provided by Sinclair on May 16, 2003 for a detailed presentation of the calculations of these emissions for each emissions unit. These emission estimates do not change do to this permit action except that the VOC emissions from the loading rack (both gasoline and diesel) are now collected and combusted in a thermal oxidizer which is explained in more detail in the following section.

Table 2 PRE-PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr ^a	T/yr ^b	lb/hr	T/yr								
Point Sources^c												
Tank 301 ^c	0	0	0	0	0	0	0	0	NC ^d	15.17	0	0
Tank 304 ^c	0	0	0	0	0	0	0	0	NC ^d	15.17	0	0
Tank 311 ^c	0	0	0	0	0	0	0	0	NC ^d	15.17	0	0
Tank 321 ^c	0	0	0	0	0	0	0	0	NC ^d	15.17	0	0
Tank 302 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Tank 305 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Tank 306 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Transmix Tank ^c	0	0	0	0	0	0	0	0	NC ^d	0.27	0	0
Prover Tank ^c	0	0	0	0	0	0	0	0	NC ^d	0.26	0	0
Loading Rack - Gasoline	0	0	0	0	0	0	0	0	NC ^d	357.6	0	0
Loading Rack - Distillate oil	0	0	0	0	0	0	0	0	NC ^d	3.26	0	0
Fugitive Emissions												
Fugitive Emissions	NA ^e	NA ^e	NA ^e	NA ^e								
Pre-Project Totals	0	0	0	0	0	0	0	0	NC ^d	424.5	0	0

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
- b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.
- c) Previous DEQ permit actions have assumed that the emissions from these sources could reasonably pass through a stack, chimney, or other functionally equivalent opening and therefore are counted towards the potential to emit of the facility. For purposes of consistency this presumption will be maintained for this permit action.
- d) NC = Not Calculated because no regulatory determination is based on pound per hour VOC emissions.
- e) NA- Not applicable, fugitive emissions are not aggregated towards the facility's potential to emit because the facility is not in a listed source category from which fugitive emissions are included (40 CFR 52.21(b)(i)(vii))

Post Project Potential to Emit

The following table presents a summary of the post project potential to emit for criteria pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. Emission estimates from all existing storage tanks remain the same. The VOC emissions from the new loading rack thermal oxidizer are estimated based on greater than 95% VOC destruction as provided by Sinclair in their applicaiton. See Appendix A for a detailed presentation of the calculations for VOC emissions from the 3 new ethanol tanks, and for the calculations of CO, VOC and NOx emissions from the new thermal oxidizer.

Particulate matter emissions from the thermal oxidizer are negligible. The thermal oxidizer is of a non-smoking design. EPA AP-42, Table 13.5-1 lists heavily smoking flares as emitting no more than 0.274 µg/m³. This combustor is of non-smoking design and emissions are expected to be even less than 0.274 µg/m³.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr ^a	T/yr ^b	lb/hr	T/yr								
Point Sources^c												
Tank 301 ^c	0	0	0	0	0	0	0	0	NC ^d	15.7	0	0
Tank 304 ^c	0	0	0	0	0	0	0	0	NC ^d	15.7	0	0
Tank 311 ^c	0	0	0	0	0	0	0	0	NC ^d	15.7	0	0
Tank 321 ^c	0	0	0	0	0	0	0	0	NC ^d	15.7	0	0
Tank 302 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Tank 305 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Tank 306 ^c	0	0	0	0	0	0	0	0	NC ^d	0.39	0	0
Tank 400 ^c	0	0	0	0	0	0	0	0	NC ^d	0.715	0	0
Tank 401 ^c	0	0	0	0	0	0	0	0	NC ^d	0.715	0	0
Tank 402 ^c	0	0	0	0	0	0	0	0	NC ^d	0.715	0	0
Transmix Tank ^c	0	0	0	0	0	0	0	0	NC ^d	0.27	0	0
Prover Tank ^c	0	0	0	0	0	0	0	0	NC ^d	0.26	0	0
Thermal Oxidizer (Loading Rack – Gasoline/Ethanol/Distillate)	Neg. ^e	Neg. ^e	Neg. ^e	Neg. ^e	2.2	9.7	5.55	24.3	NC ^d	17.23	Neg. ^e	Neg. ^e
Fugitive Emissions												
Fugitive Emissions	NA ^f	NA ^f	NA ^f	NA ^f								
Post Project Totals	Neg. ^e	Neg. ^e	Neg. ^e	Neg. ^e	2.2	9.7	0.00	24.3	NC ^d	83.9	Neg. ^e	Neg. ^e

- a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
- b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.
- c) Previous DEQ permit actions have assumed that the emissions from these sources could reasonably pass through a stack, chimney, or other functionally equivalent opening and therefore counted towards the potential to emit of the facility. For purposes of consistency this presumption will be maintained for this permit action.
- d) NC = Not Calculated because no regulatory determination is based on pound per hour VOC emissions.
- e) Neg. = negligible
- f) NA – Not applicable, fugitive emissions are not aggregated towards the facility’s potential to emit because the facility is not in a listed source category from which fugitive emissions are included (40 CFR 52.21(b)(i)(vii))

As demonstrated in Tables 2 and 3, this facility has a pre-project potential to emit for VOC emissions greater than the Major Source threshold of 100 T/yr and a post project potential to emit for VOC emissions less than the Major Source threshold of 100 T/yr. Therefore, this facility is designated as a Synthetic Minor facility. The facility’s potential to emit is greater than 80 tons per year and this facility will be designated as a SM-80 facility.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR CRITERIA POLLUTANTS

	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Sources												
Pre-Project Potential to Emit	0	0	0	0	0	0	0	0	NC ^a	424.5	0	0
Post Project Potential to Emit	Neg. ^c	Neg. ^c	Neg. ^c	Neg. ^c	2.2	9.7	5.55	24.3	NC ^a	83.9	Neg. ^b	Neg. ^b
Changes in Potential to Emit	Neg. ^c	Neg. ^c	Neg. ^c	Neg. ^c	2.2	9.7	5.55	24.3	NC ^a	-340.6	Neg. ^b	Neg. ^b

- a) NC = Not Calculated because no regulatory determination is based on pound per hour VOC emissions.
- b) Neg. = negligible

Toxic Air Pollutant Emissions

Any increase in the potential to emit¹ of a toxic air pollutant is subject to demonstrating preconstruction compliance in accordance with IDAPA 58.01.01.210. The only increase of the potential to emit toxic pollutants is ethanol emissions from the 3 new ethanol storage tanks and combustion byproducts (that were not previously emitted) from the loading rack thermal oxidizer.

Estimated emissions of ethanol from the 3 new tanks are 1,431 pounds per tank per year. Total emissions are 3x1,431=4,293 pounds per year, or 4,293 lbs/8760 hr = 0.5 pounds per hour. The screening emission level for ethanol is 125 pounds per hour, the estimated emissions are significantly below the screening emission level and preconstruction compliance is demonstrated.

Emission factors are not available for combustion byproducts from the loading rack thermal oxidizer. The applicant searched EPA’s compilation of emission factors (AP-42), American Petroleum Institute (API) publications, and National Petrochemical and Refiners Association publications and was not able to find emission factors. DEQ also conducted a search for emissions factors, none were found. In order to roughly estimate emissions the applicant assumed emission factors for combustion of liquid fuel oil in a boiler would give a sense of the potential magnitude of emission rates. The thermal oxidizer will destroy 340.6 tons per year of petroleum vapors, or approximately 78 pounds per hour. This is approximately 11 gallons per hour or 1.55 million Btus per hour.

The potential to emit of BETX (benzene, ethylbenzene, toluene and xylene) will be significantly reduced therefore toxic air pollutant preconstruction compliance is not required to be demonstrated for these pollutants. The most toxic of the other air pollutants that may be emitted from the combustion source are formaldehyde and polycyclic organic matter (POM), following are the AP-42 emission factors for external combustion of fuel oil and emission estimates for these pollutants. All pollutants are estimated to be emitted below the toxic air pollutant screening emission level and preconstruction compliance is demonstrated.

Table 5 Toxic Air Pollutant Emissions From Combustion

Pollutant	Emissions lb/10 ³ gal.	Combustion Rate (gal./hr)	Calculated Emissions (lb/hr)	Screening Emission Level	Exceeds Screening Level (Yes, No)
Formaldehyde	3.3E-2	11	3.63E-4	5.1E-4	No
Polycyclic Organic Matter (POM) ^a					
Benzo(a)anthracene	4.01E-6	11	4.41E-8		
Benzo(b,k)fluoranthene	1.48E-6	11	1.63E-8		
Chrysene	2.38E-6	11	2.62E-8		
Indeno(1,2,3,cd)pyrene	2.14E-6	11	2.35E-8		
Total POM			1.101E-7	2.0E-6	No

a) Emission factors were only available for 4 of the 6 pollutants that make up POM as defined by IDAPA 58.01.01.586.

Post Project HAP Emissions

Pre-project potential to emit hazardous air pollutants (HAPs) is was limited to less than 10 tons per year for any one HAP and less than 11.6 tons per year for all HAPs in aggregate. The proposed modification includes adding ethanol storage and handling capabilities and the addition of a thermal oxidizer to control emissions from the loading rack. No other emissions changes are proposed to occur. Ethanol is not a listed HAP and the combustion byproducts from the loading rack that are HAPs are insignificant; therefore the facility remains a minor source of

¹ Department of Environmental Quality - Air Quality Division Toxic Air Pollutant (TAP) Preconstruction Compliance Application Completeness Checklist, April 13, 2009

HAP emissions. It should be noted that because the thermal oxidizer will control HAP emissions from the loading rack the potential to emit of HAPs will be significantly reduced.

The 9.53 tons per year of HAP emissions from the loading rack to the thermal oxidizer will be reduced by roughly 95%, or emission will be approximately 0.48 tons per year. In addition there will be some hazardous air pollutants emitted from the thermal oxidizer itself though as previously discussed emission factors are not available from this source. It is expected that the HAP emissions from incomplete combustion will be less than one ton per year which in combination with those uncontrolled emissions from the loading rack will be less than 1.5 tons per year. HAP emissions from all other sources remain the same as what was previously estimated or 2.145 tons per year. Therefore, the total facility wide HAP emissions are expected to be less than $1.5+2.145=3.7$ tons per year while operating under the permit's throughput limitations (which remain unchanged).

Ambient Air Quality Impact Analyses

As presented in the emission inventory section of this Statement of Basis, the estimated emission rates of PM₁₀, SO₂, CO, and TAPs from this project were below applicable screening emission levels (EL) and published DEQ modeling thresholds established in IDAPA 58.01.01.585-586 and in the State of Idaho Air Quality Modeling Guideline². Refer to the Emissions Inventories section for additional information concerning the emission inventories.

The applicant has demonstrated pre-construction compliance to DEQ's satisfaction that emissions from this facility will not cause or significantly contribute to a violation of any ambient air quality standard. The applicant has also demonstrated pre-construction compliance to DEQ's satisfaction that the emissions increase due to this permitting action will not exceed any acceptable ambient concentration (AAC) or acceptable ambient concentration for carcinogens (AACC) for toxic air pollutants (TAP). A summary of the Ambient Air Impact Analysis for TAPs is provided in Appendix B.

An ambient air quality impact analyses document has been crafted by DEQ based on a review of the modeling analysis submitted in the application. That document is part of the final permit package for this permitting action (see Appendix B).

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Cassia County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the modified emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

² Criteria pollutant thresholds in Table 1, State of Idaho Air Quality Modeling Guideline, Doc ID AQ-011, rev. 1, December 31, 2002.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401

Tier II Operating Permit

The facility currently has a Tier II Operating Permit. The Tier II permit was originally issued to limit the facilities potential to emit HAP emissions below major source thresholds to avoid MACT applicability. The facility was still a Tier I major facility because VOC emissions were greater than 100 tons per year.

The application was submitted for a permit to construct, the permit will include new provisions (40 CFR 63 Subpart BBBB) for the gasoline storage tanks and equipment in gasoline service in addition to requirements for the new ethanol storage tanks and the new loading rack thermal oxidizer. The vast majority of the facility's emissions will be subject to new permit to construct requirements. Since the majority of the facility is regulated by the new permit to construct and since the facility did not obtain a Tier II operating permit to avoid Tier I permitting requirements the Tier II operating permit will be canceled and the facility will only be issued a permit to construct.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676

Standards for New Sources

This section establishes particulate matter emission standards for fuel-Burning Equipment. Fuel-burning equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. The primary purpose of the thermal oxidizer is not for the purpose of producing heat or power by indirect heat transfer; therefore this standard is not applicable.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301

Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for any regulated pollutant including or 10 tons per year for any one HAP or 25 tons per year for all HAPs combined. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113 and the requirements of IDAPA 58.01.01.301 do not apply. The facility currently has a Tier I operating which will be cancelled at the time of this permit issuance.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The existing facility is classified as an existing major stationary source because permitted emissions of VOC are 424.5 tons per year. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a) therefore the major facility threshold is 250 tons per year. The facility is adding a VOC thermal oxidizer on the loading rack and facility wide VOC emissions are reduced from 424.5 tons per year to 83.9 tons per year. The facility's potential to emit is less than 250 tons per year for any new source review regulated air pollutant and the facility is no longer classified as a PSD major facility.

NSPS Applicability (40 CFR 60)

40 CFR 60, Subpart XX

Standards of Performance for Bulk Gasoline Terminals

In accordance with 40 CFR 60.500(a)&(b) this subpart applies to the total of all the loading racks at bulk gasoline terminals which deliver gasoline into gasoline tank trucks which commenced construction or modification after December 17, 1980. The facility is not an affected facility because, according to Sinclair's application, the facility commenced construction in 1952 and has not been modified or reconstructed (refurbished) since December 17, 1980. The current changes do not constitute a modification; the total cost of the project is less than 50% of the cost of an entire new system. See the definition of refurbishment at 40 CFR 60.501.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61. It does not have any emission units defined as an affected facility.

40 CFR 61, Subpart V

National Emission Standards for Equipment Leaks (Fugitive Emission Sources)

§ 61.240

Applicability and Designation of sources

The provisions of this subpart apply to each of the following sources that are intended to operate in volatile hazardous air pollutant (VHAP) service: pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and control devices or systems required by this subpart.

§ 61.241

In VHAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight a volatile hazardous air pollutant (VHAP) as determined according to the provisions of §61.245(d).

Volatile hazardous air pollutant or VHAP means a substance regulated under this part for which a standard for equipment leaks of the substance has been proposed and promulgated. Benzene is a VHAP. Vinyl chloride is a VHAP.

According to Sinclair's Material Safety Data Sheet for gasoline benzene is present in quantities up to 5%, which is less than the applicability threshold of greater than 10%. Vinyl chloride is not present. Therefore, the source is not subject to this NEHSAP.

MACT Applicability (40 CFR 63)

The facility has proposed to operate as a minor source of hazardous air pollutant (HAP) emissions, and is subject to the requirements of 40 CFR 63, Subpart BBBBBBB–National Emission Standards for Hazardous Air Pollutants: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

40 CFR 63, Subpart BBBBBBB

National Emission Standards for Hazardous Air Pollutants: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities

§ 63.11080

What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from area source gasoline distribution bulk terminals, bulk plants, and pipeline facilities. This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

Sinclair is a bulk gasoline terminal and is an area source with emissions less than 10 tons of any one HAP and less than 25 tons of HAPs in aggregate.

Bulk gasoline plant means any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of less than 20,000 gallons per day.

Bulk gasoline terminal means any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank and has a gasoline throughput of 20,000 gallons per day or greater.

Sinclair's gasoline throughput is greater than 20,000 gallons per day is therefore a bulk gasoline terminal.

§ 63.11081 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each area source bulk gasoline terminal, pipeline breakout station, pipeline pumping station, and bulk gasoline plant identified in paragraphs (a)(1) through (4) of this section. You are subject to the requirements in this subpart if you own or operate one or more of the affected area sources identified in paragraphs (a)(1) through (4) of this section.

(1) A bulk gasoline terminal that is not subject to the control requirements of 40 CFR part 63, subpart R (§§63.422, 63.423, and 63.424) or 40 CFR part 63, subpart CC (§§63.646, 63.648, 63.649, and 63.650).

Sinclair is not subject to the provisions of 40 CFR 63, Subpart R. Subpart R only applies to major sources of hazardous air pollutants. Therefore the facility is subject to provisions of Subpart BBBBBB.

(2) A pipeline breakout station that is not subject to the control requirements of 40 CFR part 63, subpart R (§§63.423 and 63.424).

(3) A pipeline pumping station.

(4) A bulk gasoline plant.

(b) If you are an owner or operator of affected sources, as defined in (a)(1) through (4) of this section, you are not required to meet the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you are still subject to the requirement to apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR part 71.3(a) and (b).

Sinclair currently is operating under a Tier I Operating permit. This permit action will limit the facility's potential to emit below Tier I major source thresholds and the Tier I permit will be canceled.

§ 63.11082 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks, and equipment components in vapor or liquid gasoline service that meet the criteria specified in Tables 1 through 3 to this subpart.

Table 1 lists the applicability criteria and the regulatory requirements for gasoline storage tanks. All of the facilities gasoline storage tanks are greater than 75 m³ and the facility has elected to comply with option (c) in Table 1:

Table 1, Option (c):

Equip each external floating roof gasoline storage tank according to the requirements in §60.112b(a)(2) of this chapter, except that the requirements of §60.112b(a)(2)(ii) of this chapter shall only be required if such storage tank does not currently meet the requirements of §60.112b(a)(2)(i) of this chapter.

The facility has committed to comply with the NSPS, 40 CFR 60.112b(a)(2) requirements which are included in the permit. The on-site gasoline tanks currently do not meet the requirements of 40 CFR 60.112b(a)(2)(i) therefore the requirements of 40 CFR 60.112b(a)(2)(ii) are also included in the permit.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11081 at the time you commenced operation.

The source is not a new source. The affected source is a bulk gasoline terminal, terminal was constructed in 1952.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

Sinclair has certified that the terminal does not meet the definition of reconstruction per §63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

Sinclair is an existing affected source.

§ 63.11083 *When do I have to comply with this subpart?*

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

Sinclair is not a new or reconstructed source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

Sinclair is an existing affected source and must comply no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the average daily throughput, as specified in option 1 of Table 2 to this subpart, you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

Sinclair's throughput is limited by the permit and Sinclair has not requested to increase the throughput therefore this provision is not included in the permit.

§ 63.11086 *What requirements must I meet if my facility is a bulk gasoline plant?*

Sinclair is not a bulk gasoline plant, it is a bulk gasoline terminal with a gasoline throughput greater than 20,000 gallons a day. Therefore this section does not apply.

§ 63.11087 *What requirements must I meet for gasoline storage tanks if my facility is a bulk gasoline terminal, pipeline breakout station, or pipeline pumping station?*

(a) You must meet each emission limit and management practice in Table 1 to this subpart that applies to your gasoline storage tank.

Table 1 lists the applicability criteria and the regulatory requirements for gasoline storage tanks. All of the facilities gasoline storage tanks are greater than 75 m³ and the facility has elected to comply with option (c) in Table 1:

Table 1, Option (c):

Equip each external floating roof gasoline storage tank according to the requirements in §60.112b(a)(2) of this chapter, except that the requirements of §60.112b(a)(2)(ii) of this chapter shall only be required if such storage tank does not currently meet the requirements of §60.112b(a)(2)(i) of this chapter.

(b) You must comply with the requirements of this subpart by the applicable dates specified in §63.11083, except that storage vessels equipped with floating roofs and not meeting the requirements of paragraph (a) of this section must be in compliance at the first degassing and cleaning activity after January 10, 2011 or by January 10, 2018, whichever is first.

Sinclair is an existing affected source and must comply no later than January 10, 2011 as specified in §63.11083, Sinclair's floating roof tanks currently meet the requirements of paragraph (a).

(c) You must comply with the applicable testing and monitoring requirements specified in §63.11092(e).

These testing and monitoring requirements are included in the permit.

(d) You must submit the applicable notifications as required under §63.11093.

The notification of compliance status requirement of §63.11093 is included in the permit.

(e) *You must keep records and submit reports as specified in §§63.11094 and 63.11095.*

The recordkeeping and reporting requirements are included in the permit.

(f) *If your gasoline storage tank is subject to, and complies with, the control requirements of 40 CFR part 60, subpart Kb of this chapter, your storage tank will be deemed in compliance with this section. You must report this determination in the Notification of Compliance Status report under §63.11093(b).*

Sinclair's gasoline storage tanks are not subject to the requirements of Subpart Kb because it is not an affected facility because the tanks were constructed prior to July 23, 1984.

§ 63.11088 *What requirements must I meet for gasoline loading racks if my facility is a bulk gasoline terminal, pipeline breakout station, or pipeline pumping station?*

(a) *You must meet each emission limit and management practice in Table 2 to this subpart that applies to you.*

Table 2 specifies requirements which apply depending upon whether the daily throughput exceeds 250,000 gallons per day. Sinclair may exceed 250,000 gallons per day; but has stated that they want all options available. Therefore, the permit includes requirements that apply if the throughput is less than 250,000 gallons per day and requirements that apply if throughput equals or exceeds 250,000 gallons per day.

In accordance with 40 CFR 63.11088 and Table 2 to 40 CFR 63, Subpart BBBBBB the permittee shall for a gasoline loading rack with a gasoline throughput of less than 250,000 gallons per day:

- Use submerged filling with a submerged fill pipe that is no more than 6 inches from the bottom of the cargo tank.
- Make records available within 24 hours to document your gasoline throughput.

In accordance with 40 CFR 63.11088 and Table 2 to 40 CFR 63, Subpart BBBBBB the permittee shall for a gasoline loading rack with a gasoline throughput of equal to or greater than 250,000 gallons per day:

- Equip your loading rack(s) with a vapor collection system designed to collect the TOC vapors displaced from cargo tanks during product loading; and
- 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
- Design and operate the vapor collection system to prevent any TOC vapors collected at one loading rack from passing to another loading rack; and
- Limit the loading of gasoline into gasoline cargo tanks that are vapor tight using the procedures specified in 40 CFR 60.502(e) through (j). For the purposes of this section, the term "tank truck" as used in 40 CFR 60.502(e) through (j) means "cargo tank" as defined in §63.11100.

The requirements of 40 CFR 60.502(e) through (j) are also included in the permit.

(b) *As an alternative for railcar cargo tanks to the requirements specified in Table 2 to this subpart, you may comply with the requirements specified in §63.422(e).*

Sinclair is not opting to comply with this option and did not include railcars in the application.

(c) *You must comply with the requirements of this subpart by the applicable dates specified in §63.11083.*

Sinclair must comply by no later than January 10, 2011.

(d) *You must comply with the applicable testing and monitoring requirements specified in §63.11092.*

The applicable testing requirements are included in the permit.

(e) *You must submit the applicable notifications as required under §63.11093.*

The applicable notification requirements are included in the permit.

(f) You must keep records and submit reports as specified in §§63.11094 and 63.11095.

The applicable recordkeeping and reporting requirements are included in the permit.

§ 63.11089 *What requirements must I meet for equipment leak inspections if my facility is a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station?*

(a) Each owner or operator of a bulk gasoline terminal, bulk plant, pipeline breakout station, or pipeline pumping station subject to the provisions of this subpart 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.

(b) 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.

(c) 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 paragraph (d) of this section.

(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.

(e) You must comply with the requirements of this subpart by the applicable dates specified in §63.11083.

All of the preceding requirements are applicable to Sinclair and they are included in the permit.

§ 63.11092 *What testing and monitoring requirements must I meet?*

(a) Each owner or operator subject to the emission standard in §63.11088 for gasoline loading racks must comply with the requirements in paragraphs (a) through (d) of this section.

When Sinclair's daily gasoline throughput of the loading rack exceeds 250,000 gallons per day they are required to the emission standard for TOC which is less than or equal to 80 mg/l of gasoline loaded in accordance with §63.11088 and are subject to (a) through (d) of this section.

(1) Conduct a performance test on the vapor processing and collection systems according to either paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

This requirement is included in the permit.

(i) Use the test methods and procedures in §60.503 of this chapter, except a reading of 500 parts per million shall be used to determine the level of leaks to be repaired under §60.503(b) of this chapter.

This requirement is included in the permit.

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

This option is available for Sinclair to pursue.

(2) If you are operating your gasoline loading rack in compliance with an enforceable State, local, or tribal rule or permit that requires your loading rack to meet an emission limit of 80 milligrams (mg), or less, per liter of

gasoline loaded (mg/l), you may submit a statement by a responsible official of your facility certifying the compliance status of your loading rack in lieu of the test required under paragraph (a)(1) of this section.

When gasoline throughput exceeds 250,000 gallons per day Sinclair is subject to an emission limit of 80 milligrams (mg), or less. However this is a MACT standard not a standard an enforceable State, local, or tribal rule or permit and this section of the section of the MACT does not apply to Sinclair.

(3) If you have conducted performance testing 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, you may submit the results of such testing in lieu of the test required under paragraph (a)(1) of this section, provided the testing was conducted using the test methods and procedures in §60.503 of this chapter. Should the Administrator 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 compliance date specified in §63.11083; thus, previous test reports should be submitted as soon as possible after January 10, 2008.

This option is available for Sinclair to use and is included in the permit. At the time of permit issuance the “Administrator” means the Administrator of EPA because DEQ has not been delegated MACT Subpart BBBBBB.

(4) The performance test requirements of §63.11092(a) do not apply to flares defined in §63.11100 and meeting the flare requirements in §63.11(b). The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in §63.11(b) and 40 CFR 60.503(a), (b), and (d).

Sinclair’s proposed thermal oxidizer does not meet the definition of a flare because it is an enclosed system.

(b) For each performance test conducted under paragraph (a)(1) of this section, the owner or operator shall determine a monitored operating parameter value for the vapor processing system using the procedures specified in paragraphs (b)(1) through (5) of this section.

This applies to Sinclair and is included in the permit.

(1) Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart 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 vapor processor systems specified in paragraphs (b)(1)(i) through (iv) of this section. During the performance test, continuously record the operating parameter as specified under paragraphs (b)(1)(i) through (iv) of this section.

This applies to Sinclair and is included in the permit.

The requirements of 40 CFR 63.11092(b)(1)(i) and associated subcategories does not apply to Sinclair because they do not use carbon to control emissions.

The requirements of 40 CFR 63.11092(b)(1)(ii) and associated subcategories does not apply to Sinclair because they do not use a refrigeration condenser system to control emissions.

(iii) Where a thermal oxidation system other than a flare is used, the owner or operator shall monitor the operation of the system as specified in paragraphs (b)(1)(iii)(A) or (B) of this section.

The requirements of 40 CFR 63.11092(b)(1)(iii) and the following subcategories apply to Sinclair because they use a thermal oxidation system to control emissions.

(A) A 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 to paragraph (b)(1)(iii)(A) of this section, you may choose to meet the requirements listed in paragraphs (b)(1)(iii)(B)(1) and (2) of this section.

(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 proximity to the pilot light to indicate the presence of a flame.

(2) Develop and submit to the Administrator a monitoring and inspection plan that describes the owner or operator's approach for meeting the requirements in paragraphs (b)(1)(iii)(B)(2)(i) through (v) of this section. (At the time of permit issuance the "Administrator" means the Administrator of EPA because DEQ has not been delegated MACT Subpart BBBBBB).

(i) The thermal oxidation system shall be equipped to automatically prevent gasoline loading operations from beginning at any time that the pilot flame is absent.

(ii) The owner or operator 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.

(iii) The owner or operator shall perform semi-annual preventive maintenance inspections of the thermal oxidation system according to the recommendations of the manufacturer of the system.

(iv) The monitoring plan developed under paragraph (2) of this section shall specify conditions that would be considered malfunctions of the thermal oxidation system during the inspections or automated monitoring performed under paragraphs (b)(1)(iii)(B)(2)(ii) and (iii) of this section, describe specific corrective actions that will be taken to correct any malfunction, and define what the owner or operator would consider to be a timely repair for each potential malfunction.

(v) The owner or operator 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 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.

(iv) Monitoring an alternative operating parameter or a parameter of a vapor processing system other than those listed in paragraphs (b)(1)(i) through (iii) of this section will be allowed upon demonstrating to the Administrator's satisfaction that the alternative parameter demonstrates continuous compliance with the emission standard in §63.11088(a).

The alternatives for a thermal oxidizer are included in 40 CFR 63.11092(b)(1)(iii) which are included in the permit. At the time of permit issuance the "Administrator" means the Administrator of EPA because DEQ has not been delegated MACT Subpart BBBBBB.

(2) Where a flare meeting the requirements in §63.11(b) is used, a heat-sensing device, such as an ultraviolet beam sensor or a thermocouple, must be installed in proximity to the pilot light to indicate the presence of a flame.

Sinclair's thermal oxidizer does not meet the definition of a flare because it has an enclosed flame.

(3) Determine an operating parameter value based on the parameter data monitored during the performance test, supplemented by engineering assessments and the manufacturer's recommendations.

This requirement applies and is included in the permit.

(4) Provide for the Administrator's approval the rationale for the selected operating parameter value, monitoring frequency, and averaging time, including data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the emission standard in §63.11088(a).

This requirement applies and is included in the permit. At the time of permit issuance the "Administrator" means the Administrator of EPA because DEQ has not been delegated MACT Subpart BBBBBB.

(5) If you have chosen to comply with the performance testing alternatives provided under paragraph (a)(2) or paragraph (a)(3) of this section, the monitored operating parameter value may be determined according to the provisions in paragraph (b)(5)(i) or paragraph (b)(5)(ii) of this section.

This requirement and following subcategories apply and are referenced in the permit.

(i) Monitor an operating parameter that has been approved by the Administrator and is specified in your facility's current enforceable operating permit. At the time that the Administrator requires a new performance test, you must determine the monitored operating parameter value according to the requirements specified in paragraph (b) of this section.

At the time of permit issuance the "Administrator" means the Administrator of EPA because DEQ has not been delegated MACT Subpart BBBBBB.

(ii) Determine an operating parameter value based on engineering assessment and the manufacturer's recommendation and submit the information specified in paragraph (b)(4) of this section for approval by the Administrator. At the time that the Administrator requires a new performance test, you must determine the monitored operating parameter value according to the requirements specified in paragraph (b) of this section.

(c) For performance tests performed after the initial test required under paragraph (a) of this section, the owner or operator shall document the reasons for any change in the operating parameter value since the previous performance test.

This requirement applies and is included in the permit.

(d) Each owner or operator of a bulk gasoline terminal subject to the provisions of this subpart shall comply with the requirements in paragraphs (d)(1) through (4) of this section.

This requirement and following subcategories apply and are referenced in the permit.

(1) Operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the operating parameter value for the parameters described in paragraph (b)(1) of this section.

(2) In cases where an alternative parameter pursuant to paragraph (b)(1)(iv) or paragraph (b)(5)(i) of this section is approved, each owner or operator shall operate the vapor processing system in a manner not to exceed or not to go below, as appropriate, the alternative operating parameter value.

(3) Operation of the vapor processing system in a manner exceeding or going below the operating parameter value, as appropriate, shall constitute a violation of the emission standard in §63.11088(a), except as specified in paragraph (d)(4) of this section.

(4) For the monitoring and inspection, as required under paragraphs (b)(1)(i)(B)(2) and (b)(1)(iii)(B)(2) of this section, malfunctions that are discovered shall not constitute a violation of the emission standard in §63.11088(a) if corrective actions as described in the monitoring and inspection plan are followed. The owner or operator must:

(i) Initiate corrective action to determine the cause of the problem within 1 hour;

(ii) Initiate corrective action to fix the problem within 24 hours;

(iii) Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions;

(iv) Minimize periods of start-up, shutdown, or malfunction; and

(v) Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem.

(e) Each owner or operator subject to the emission standard in §63.11087 for gasoline storage tanks shall comply with the requirements in paragraphs (e)(1) through (3) of this section.

(1) If your gasoline storage tank is equipped with an internal floating roof, you must perform inspections of the floating roof system according to the requirements of §60.113b(a) if you are complying with option 2(b) in Table 1 to this subpart, or according to the requirements of §63.1063(c)(1) if you are complying with option 2(d) in Table 1 to this subpart.

Sinclair's gasoline tanks are not internal floating roofs.

(2) If your gasoline storage tank is equipped with an external floating roof, you must perform inspections of the floating roof system according to the requirements of §60.113b(b) if you are complying with option 2(c) in Table 1 to this subpart, or according to the requirements of §63.1063(c)(2) if you are complying with option 2(d) in Table 1 to this subpart.

Sinclair is complying with option 2(c) in Table 1 and must perform inspections of the floating roof system according to the requirements of §60.113b(b) which are included in the permit.

(3) If your gasoline storage tank is equipped with a closed vent system and control device, you must conduct a performance test and determine a monitored operating parameter value in accordance with the requirements in paragraphs (a) through (d) of this section, except that the applicable level of control specified in paragraph (a)(2) of this section shall be a 95-percent reduction in inlet total organic compounds (TOC) levels rather than 80 mg/l of gasoline loaded.

Sinclair's tanks are not equipped with a closed vent system and control device, therefore this section does not apply.

(f) The annual certification test for gasoline cargo tanks shall consist of the test methods specified in paragraphs (f)(1) or (f)(2) of this section.

This compliance demonstration only applies as an option to those bulk gasoline terminals with a throughput of 250,000 gallons per day or greater. Sinclair's throughput is less than this.

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Wherever the word “inclusive” was used in the existing permit it was changed to “combined”, this change was requested by the DEQ Regional Office in order to provide clarity.

STORAGE TANKS 301, 304, 311, 321, PROVER & TRANSMIX TANKS

Permit Conditions 4 through 14 of this new Permit to Construct are unchanged from the existing permit conditions in Tier II Operating Permit number T2-2007.0172 except that the HAP emission rate limits have been deleted. The HAP limits were only a fraction of the major source thresholds; gasoline and diesel throughput limits sufficiently limit HAP emission below major source thresholds without a need for specific emission rate limits.

STORAGE TANKS 302, 305, 306, 400, 401, & 402

Permit Conditions 15 through 19 are for the fixed roof diesel and ethanol storage tanks. The requirements for the diesel storage tanks remain unchanged. New permit conditions are added for the new ethanol storage tanks as described below.

Permit Condition 15 is the process description. The process description has been amended to include the three new 19,200 gallons ethanol storage tanks.

Permit Condition 16.1 remains unchanged.

Permit Condition 16.2 is a new permit condition and limits ethanol throughput to 32,193,000 gallons per any consecutive 12-month period consistent with the emission estimates for VOC emissions from the ethanol storage tanks.

Permit Condition 17.1 remains unchanged.

Permit Condition 17.2 is a new permit condition and limits the fuel to be stored in the three new 19,200,000 gallons storage tanks to ethanol consistent with the emission estimates for VOC emissions from these tanks.

Permit Condition 18 is only changed to include that the permittee shall maintain and operate equipment to monitor throughput through the three new ethanol tanks (Tanks 410, 411, and 412).

Permit Condition 19 only changed to include that the permittee shall monitor the throughput of ethanol as opposed to just monitoring the throughput of distillate.

GASOLINE AND DISTILLATE FUEL LOADING RACK

Permit Condition 20 is the process description which has been updated to specify that all vapors displaced during loading rack operations are collected and treated in the thermal oxidizer.

Permit Condition 21 is the updated emission rate limits for the loading rack. Emissions are now controlled by a thermal oxidizer. The VOC emission limit is reduced from 360.9 tons per year to 17.4 tons per year. Hazardous air pollutants were limited to 9.53 tons per year, these emissions are also expected to be significantly reduced though the exact reduction can not be estimated because there are no emission factors available for combustion byproducts from the thermal oxidizer. Even through the exact emission reduction of HAP can not be determined it can be said with certainty that emissions will be significantly below major source thresholds and that a numerical emission rate limit is not necessary. Limitations on gasoline, diesel fuel, and ethanol throughput are sufficient to assure emissions remain below HAP major source thresholds.

HAP emissions from the loading rack to the thermal oxidizer will be reduced by roughly 95%, or emission will be approximately 0.48 tons per year. In addition there will be some hazardous air pollutants emitted from the thermal oxidizer itself though as previously discussed emission factors are not available. It is expected that the HAP emissions from incomplete combustion will be less than one ton per year which in combination with those uncontrolled emissions from the loading rack will be less than 1.5 tons per year.

Permit Condition 22 establishes the throughput limits for the facility. The gasoline and diesel throughput remain unchanged. An ethanol throughput limit was added to this permit conditions. The ethanol throughput limit is consistent with the emission estimations provided by the applicant.

Permit Condition 23 limits the type of fuel that may be loaded out at the rack. Ethanol was added to this permit condition, otherwise it remains the same.

Permit Condition 24 is unchanged, it requires monitoring throughput of the loading rack.

Permit Condition 25 is a new permit condition that requires that all vapors displaced during loading rack operation be collected and combusted in a John Zink thermal oxidizer.

Permit Condition 26 is a new permit condition is requires that a pilot flame be present during anytime that petroleum product is being dispensed. It also requires that a thermocouple flame sensor be installed.

Permit Condition 27 is a new permit condition that limits cargo tank trucks filled at the loading rack to those that are compatible with the vapor collection system.

Permit Condition 28 is a new permit condition that requires that the cargo tanks be connected to the vapor collection system anytime petroleum is loaded.

Permit Condition 29 requires monitoring and recording of throughputs to assure compliance with permit throughput limits. The existing permit condition was only changed to add ethanol monitoring.

Permit Condition 30 is a new permit condition that requires monitoring to assure that the cargo tanks are connected to the vapor collection system during product loading and to assure that a pilot flame is present during this time period.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there were no comments on the application and there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

Burley Products Terminal
Ethanol Loading PTC Application
Addendum, March 29th 2010 addressing concerns from D. Pittman, IDEQ

EPA TANKS 4.0.D MODEL OUTPUT

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification
User Identification: UNK tank ID's TBD
City: Boise
State: Idaho
Company: SOC
Type of Tank: Vertical Fixed Roof Tank
Description: 2010 emissions from adding ethanol tanks

Tank Dimensions
Shell Height (ft): 27.00
Diameter (ft): 11.00
Liquid Height (ft): 27.00
Avg. Liquid Height (ft): 10.00
Volume (gallons): 19,194.30
Turnovers: 559.07
Net Throughput(gal/yr): 10,731,000.00
Is Tank Heated (y/n): N

Paint Characteristics
Shell Color/Shader: White/White
Shell Condition: Good
Roof Color/Shader: White/White
Roof Condition: Good

Roof Characteristics
Type: Cone
Height (ft): 1.00
Slope (ft/ft) (Cone Roof): 0.20

Breather Vent Settings
Vacuum Settings (psig): -0.03
Pressure Settings (psig): 0.03

Meteorological Data used in Emissions Calculations: Boise, Idaho (Avg Atmospheric Pressure = 13.28 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

UNK tank ID's TBD - Vertical Fixed Roof Tank
 Boise, Idaho

Month	Day/Liquid Surf Temperature (deg F)			Liquid Tank Temp (deg F)			Vapor Pressure (psia)			Vapor Loss Weight		Liquid Loss Fract		Vapor Loss Fract		Misc Weight	Basis for Vapor Pressure Calculations
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%		
AN	52.81	48.88	58.74	50.94			0.5120	0.4138	0.6289	48.0700						48.07	Option 2, A=8.321, B=1718.21, C=237.52

**TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)**

**UNK tank ID's TBD - Vertical Fixed Roof Tank
Boise, Idaho**

Annual Emission Calculations

Standing Liquid (ft):	102.5794
Vapor Space Volume (cu ft):	1,647,2417
Vapor Density (lb/cu ft):	0.0043
Vapor Space Expansion Factor:	0.0295
Vented Vapor Saturation Factor:	0.8801
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,647,2417
Tank Diameter (ft):	11.0000
Vapor Space Octave (ft):	17.3333
Tank Shell Height (ft):	27.0000
Average Liquid Height (ft):	10.0000
Roof Octave (ft):	0.3333
Roof Octave (Open Roof)	
Roof Octave (ft):	0.3333
Roof Height (ft):	1.0000
Roof Slope (ft/ft):	0.2000
Shell Radius (ft):	5.5000
Vapor Density	
Vapor Density (lb/cu ft):	0.0043
Vapor Molecular Weight (lb-mole/lb-mole):	46.0700
Vapor Pressure at Daily:	
Surface Temperature (psia):	0.5120
Daily Avg. Liquid Surface Temp. (deg. F):	512.4830
Daily Average Ambient Temp. (deg. F):	50.9208
Refr. Gas Constant R:	
Liquid Bulk Temperature (deg. F):	10.731
Temperature Correction Factor:	510.8105
Temperature Correction Factor:	0.1202
Tank Vapor Saturation Pressure (psia):	0.1700
Daily Total Saturated Vapor Factor (lb-mole/cu ft):	1.600,5355
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0295
Daily Vapor Temperature Range (deg. F):	20.7125
Daily Vapor Temperature Range (deg. F):	20.7125
Daily Vapor Pressure Range (psia):	0.0300
Daily Vapor Pressure Range (psia):	0.0300
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.5120
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.4138
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.6229
Daily Avg. Liquid Surface Temp. (deg. F):	52.6530
Daily Avg. Liquid Surface Temp. (deg. F):	52.6530
Daily Max. Liquid Surface Temp. (deg. F):	58.8111
Daily Min. Liquid Surface Temp. (deg. F):	23.8750
Daily Ambient Temp. Range (deg. F):	
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.8801
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.5120

Vapor Space Outage (lb):	17.3333
Working Losses (lb):	1,490,3185
Vapor Monitor Weight (lb-in-outlet):	1,327.7492
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	46.0760
Annual Net Throughput (gal/yr):	0.5120
Annual Turnover:	10.7310000000
Turnover Factor:	659.0723
Maximum Liquid Volume (gal):	0.2813
Maximum Liquid Weight (lb):	19.1942371
Total Density (lb):	4726.4
Working Loss Product Factor:	111000
	1.0000

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

UNK tank ID's TBD - Vertical Fixed Roof Tank
Boise, Idaho

Components	Losses(lbs)		
	Working Loss	Breathing Loss	Total Emissions
Ethyl alcohol	1,327.74	102.58	1,430.32

Burley Products Terminal
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**FUGITIVE EMISSIONS CALCULATION AND AP-42 METHODOLOGY FOR
UNCONTROLLED LOADING RACK EMISSIONS**

Sinclair Oil Corp., Burtley Terminal
 2009 Emissions inventory
 Fugitive Emissions
 EU#12

Re: Protocol for Equipment Leak Emission Estimates
 (EPA-453/R-95-017, Table 2-3)
 AP-42, 4 ed, (Fugitive Emission Factors, Table 9.1-2)

Fugitive VOC emissions

Source	Pump Seals	Valves	Flanges	Drains	Others	VOC Emission Rate (TPY)
1 Gasoline service						
Quantity	8	200	400	3	30	
Emissions Factor (lb/hr-source)	0.00119	0.0000948	0.0000176	0.07	0.000287	
Emissions (TPY)	0.0416976	0.0830448	0.0308352	0.9198	0.0377118	1.11
2 Distillate oil service						
Quantity	5	100	300	0	30	
Emissions Factor (lb/hr-source)	0.00119	0.0000948	0.0000176	0.07	0.000287	
Emissions (TPY)	0.026061	0.0415224	0.0231264	0	0.0377118	0.13
TOTAL VOC EMISSIONS						1.24

CR
 3/27/09

Fugitive emissions - gasoline service

Component	Liquid Mass Fraction	VOC Emission Rate (TPY)	HAP Emission Rate (TPY)
1 Benzene	0.0188	0.021	0.021
2 Hexane	0.0181	0.020	0.020
3 Xylene-o	0.0573	0.064	0.064
4 Xylene-m	0.0672	0.075	0.075
5 Xylene-p (inc. with o & m)	0.0000	0.000	0.000
6 Toluene	0.0972	0.108	0.108
7 Ethylbenzene	0.0207	0.023	0.023
8 Naphthalene	0.0013	0.001	0.001
9 Trimethylpentane (2,2,4)	0.0151	0.017	0.017
10 Cumene	0.0022	0.002	0.002
11 Non HAP Gasoline	0.7021	0.782	
TOTAL	1.0000	1.113	0.332

Fugitive emissions - fuel oil service

Component	Liquid Mass Fraction	VOC Emission Rate (TPY)	HAP Emission Rate (TPY)
1 Benzene	0.0000	0.0000	0.0000
2 Hexane	0.0000	0.0000	0.0000
3 Xylene-o	0.0003	0.0000	0.0000
4 Xylene-m	0.0006	0.0001	0.0001
5 Xylene-p (inc. with o & m)	0.0000	0.0000	0.0000
6 Toluene	0.0002	0.0000	0.0000
7 Ethylbenzene	0.0000	0.0000	0.0000
8 Naphthalene	0.0017	0.0002	0.0002
9 Trimethylpentane (2,2,4)	0.0000	0.0000	0.0000
10 Cumene	0.0000	0.0000	0.0000
11 Non HAP Fuel Oil	0.9972	0.1281	
TOTAL	1.0000	0.1284	0.0004

TOTAL VOC EMISSION RATE (TPY)= 1.24
 TOTAL HAP EMISSION RATE (TPY)= 0.33

Sinclair Oil Corp., Burley Terminal
 2009 Emissions Inventory
 Loading Rack Emissions
 EU#11

Facility Input:
 Gasoline 2366 BPD 863667 BPY
 Distillate Fuel Oil 2010 BPD 733764 BPY

Gasoline:
 Annual Throughput 863667 BPY
 Annual Throughput 36274 M gpy

Formula: Loading Losses (lb/1000 gal) = (12.46)(S)(P)(M)(T) Re: AP-42

Where: S = saturation factor
 P = True Vapor Pressure (psia)
 M = Molecular Weight of Vapor
 T = Liquid Temperature (deg. R)

MW 66
 P_{vp} 4.1037 psia
 Saturation Factor 1
 Temperature 506.4 deg. R
 Emission Factor 6.6641 lb/M gal
 Total VOC emission rate 120.87 TPY

Component	Vapor Mass Fraction	Emission Rate (TPY)	HAP Emission Rate (TPY)
1 Benzene	0.0053	0.6408	0.6408
2 Hexane	0.0086	1.0395	1.0395
3 Xylene-o	0.0009	0.1088	0.1088
4 Xylene-m	0.0013	0.1571	0.1571
5 Xylene-p (inc. with o & m)	0.0000	0.0000	0.0000
6 Toluene	0.0075	0.9065	0.9065
7 Ethylbenzene	0.0005	0.0604	0.0604
8 Naphthalene	0.0000	0.0001	0.0001
9 Trimethylpentane (2,2,4)	0.0022	0.2659	0.2659
10 Cumene	0.0000	0.0038	0.0038
11 Non HAP gasoline	0.9737	117.6848	
SUBTOTAL	1.00	120.87	3.18

Distillate Fuel Oil

Annual Throughput 733764 BPY
 Annual Throughput 30818 M gpy

Formula: Loading Losses (lb/1000 gal) = (12.46)(S)(P)(M)(T) Re: AP-42

Where: S = saturation factor
 P = True Vapor Pressure (psia)
 M = Molecular Weight of Vapor
 T = Liquid Temperature (deg. R)

MW 130
 P_{vp} 0.0044 psia
 Saturation Factor 1
 Temperature 506.4 deg. R
 Emission Factor 0.0141 lb/M gal
 Total VOC emission rate 0.22 TPY

Component	Vapor Mass Fraction	Emission Rate (TPY)	HAP Emission Rate (TPY)
1 Benzene	0	0.0000	0.0000
2 Hexane	0	0.0000	0.0000
3 Xylene-o	0.00458	0.0010	0.0010
4 Xylene-m	0.01170	0.0026	0.0026
5 Xylene-p (inc. with o & m)	0	0.0000	0.0000
6 Toluene	0.01498	0.0033	0.0033
7 Ethylbenzene	0	0.0000	0.0000
8 Naphthalene	0.00079	0.0002	0.0002
9 Trimethylpentane (2,2,4)	0	0.0000	0.0000
10 Cumene	0	0.0000	0.0000
11 Non HAP Fuel oil	0.96785	0.2099	
SUBTOTAL	1.00	0.22	0.0070

Vapor and Liquid HAP Speciations
 Updated per partial speciation of Tanks 4.09b
 3/3/10

	Component	Vapor Mass Fraction Gasoline	Vapor Mass Fraction Fuel Oil
1	Benzene	0.0053	0.0000
2	Hexane	0.0086	0.0000
3	Xylene-o	0.0009	0.0046
4	Xylene-m	0.0013	0.0118
5	Xylene-p	0.0000	0.0000
6	Toluene	0.0075	0.0150
7	Ethylbenzene	0.0005	0.0000
8	Naphthalene	0.0000	0.0008
9	Trimethylpentane (2)	0.0022	0.0000
10	Cumene	0.0000	0
11	Bulk	0.9737	0.9679
	TOTAL	1	1

p with o and m

	Component	Liquid Mass Fraction Gasoline	Liquid Mass Fraction Fuel Oil
1	Benzene	0.01880	0.00000
2	Hexane	0.01810	0.00000
3	Xylene-o	0.05730	0.00030
4	Xylene-m	0.06720	0.00060
5	Xylene-p	0.00000	0.00000
6	Toluene	0.09720	0.00020
7	Ethylbenzene	0.02070	0.00000
8	Naphthalene	0.00130	0.00170
9	Trimethylpentane (2)	0.01510	0.00000
10	Cumene	0.00220	0.00000
11	Bulk	0.70210	0.99720
	TOTAL	1.00000	1.00000

p with o and m

After the project is complete, the facility will have potential emissions less than major source thresholds. Sinclair is requesting the cancelation of the Tier 1 operating permit.

There will be no changes to the existing tankage.

4 EMISSIONS ANALYSIS,

4.1 Existing Equipment list -

The information provided in this table was submitted to the IDEQ on page 4-2 of the 4-8-2002 T-2 renewal application to Kevin Schilling and on Page 11 of the 10-9-2006 T-1 & T-2 permit renewal applications to Mike Simon. The information is unchanged from the original T-1 application. All tank emissions are generated from EPA's TANKS program. Rack emissions are from AP-42, section 5.2, EQ-1.

TANK No.	TYPE	SIZE (GAL)	PRODUCT	ANNUAL THROUGHPUT GAL	PTE VOC TPY _s	PTE HAP TPY _s
301	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
304	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
311	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
321	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
302	VFR	825,024	DIESEL	155,599,000	0.39	0.013
305	VFR	825,024	DIESEL	155,599,000	0.39	0.013
306	VFR	825,024	DIESEL	155,599,000	0.39	0.013
TRANSMIX	FR		MIXED	38,030	0.27	0.007
PROVER	FR	734	VARIOUS	220,000	0.26	0.007
RACK GASOLINE	SUB FILL		GASOLINE	107,310,000	357.6	9.42
RACK DIESEL	SUB FILL		DIESEL	462,996,000	3.26	0.105
FUGITIVE COMP. ₂			MIXED	N/A	1.24	0.332

- 1 Not intended to be limits, for emissions estimates only
- 2 AP-42 methodology for Fugitive components
- 3 TANKS 4.0.9d Loading rack and fugitive HAPS use AP-42.

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4.2 Proposed Equipment

TANK No.	TYPE	SIZE	PRODUCT	ANNUAL THROUGHPUT	VOC TPY ₄	HAP TPY ₄	TAP TPY ₄	NOx TPY	CO TPY
400	VFR	19,200	ETHANOL	10,731,000	0.175	n/a	0.175	n/a	n/a
401	VFR	19,200	ETHANOL	10,731,000	0.175	n/a	0.175	n/a	n/a
402	VFR	19,200	ETHANOL	10,731,000	0.175	n/a	0.175	n/a	n/a
500	HOR	1,000	PROPANE	n/a	n/a	n/a	n/a	n/a	n/a
FUGITIVE COMP.			ALL	TOTAL	trivial	trivial	trivial	n/a	n/a
ZINK VCU	VCU		ALL	TOTAL	17.4 ₅	trivial	trivial	9.7	24.26

4 Voc, HAP and TAP Tank emissions based on potential throughput of 29,400gals/day. Ethanol emissions are 100% VOC

5 Based on NSPS Subpart XX, 35 mg/l TOC (0.292 lbs/l, 000 gals gasoline loaded) and 5% pte for diesel or ((.292*118,041,000/1000) + (3.26*.05))

4.3 New Facility Equipment (Post project)

TANK No.	TYPE	SIZE (GAL)	PRODUCT	ANNUAL THROUGHPUT (GAL) ₁	PTE VOC TPY _{3,4}	PTE HAP TPY ₃
301	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
304	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
311	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
321	EFR	838,437	GASOLINE	86,359,000	15.17	0.436
302	VFR	825,024	DIESEL	155,599,000	0.39	0.013
305	VFR	825,024	DIESEL	155,599,000	0.39	0.013
306	VFR	825,024	DIESEL	155,599,000	0.39	0.013
400	VFR	19,200	ETHANOL	10,731,000	0.715	N/A
401	VFR	19,200	ETHANOL	10,731,000	0.715	N/A
402	VFR	19,200	ETHANOL	10,731,000	0.715	N/A
500	HOR	1,000	PROPANE	N/A	N/A	N/A
TRANSMIX	FR		MIXED	38,030	0.27	0.007
PROVER	FR	734	VARIOUS	220,000	0.26	0.007
RACK GASOLINE/ETHANOL	SUB FILL	N/A	GASOLINE	118,041,000	17.23 ₅	Trivial
RACK DIESEL	SUB FILL	N/A	DIESEL	462,996,000	0.163 ₅	Trivial
FUGITIVE COMP. ₂		N/A	MIXED	N/A	1.24	0.332

1 Not intended to be limits, for emissions estimates only

2 AP-42 methodology for Fugitive components

3 TANKS 4.0.9d

4 Ethanol emissions are assumed to be 100% VOC

5 Based on NSPS Subpart XX, 35 mg/l TOC (0.292 lbs/l, 000 gals gasoline loaded) and 5% pte for diesel or ((.292*118,041,000/1000) + (3.26*.05))

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Tank emissions are generated from EPA TANKS 4.0.9d program. Fugitive component emissions are based on EPA Protocol for Equipment Leak Emission Estimates, (EPA-453/R-95-017, Table 2-3) AP-42, 4 ed, (Fugitive Emission Factors, Table 9.1-2). The current uncontrolled rack emissions are based on AP-42 factors, as submitted with our Annual Emissions Inventory and are included for diesel loading only. See attachments for detail of existing rack and component calculations.

Proposed equipment VOC emissions from the Loading Rack (Zink VCU) are based on NSPS subpart XX (40 CFR 60.502) standard of 35 mg/l of gasoline loaded (0.292 lbs/1,000 gals loaded). Ethanol loading is based on 10% to maximum gasoline throughput in order to account for ethanol loading/blending (107,310,000 gal gasoline + 10,731,000 gal ethanol) * (0.292 lb/1000 gal). Storage tank emissions are calculated with EPA TANKS 4.0.9d and Fugitive component emissions are calculated as noted before with the EPA protocol.

4.4 HAP VAPOR MASS FRACTION TABLE,

	Component	Vapor Mass fraction Gasoline	Vapor Mass Fraction Fuel oil
1	Benzene	0.0053	0.0000
2	Hexane	0.0086	0.0000
3	Xylene-o	0.0009	0.0046
4	Xylene-m	0.0013	0.0118
5	Xylene-p	0.0000	0.0000
6	Toluene	0.0075	0.0150
7	Ethylbenzene	0.0005	0.0000
8	Naphthalene	0.0000	0.0008
9	Trimethylpentane (2,2,4)	0.0022	0.0000
10	Cumene	0.0000	0
11	Bulk	0.9737	0.9679
	TOTAL	1	1

Note: based on TANKS 4.0.9d speciation, actual speciation will vary.

4.5 FACILITY WIDE EMISSION SUMMARY TPY,

POLLUTANT	COMPONENTS	TANKS	RACK	TOTAL CURRENT	TOTAL POST PROJECT
HAP	0.33	1.8	9.52	11.65 *	2.13 *
TAP(Ethyl Alcohol)	n/a	1.14	n/a	n/a *	1.14
VOC	1.24	62.38	360.86	424.48	84.83 ,
Nox	n/a	n/a	9.7	n/a	9.7

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CO	n/a	n/a	24.26	n/a	24.26 _a
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- 6 No individual HAP is greater than 10 TPY based on vapor mass fractions. 2.13 TPY total from the tanks and component leaks. Unknown factor for HAP emissions after combustion.
- 7 Using 17.4 TPY for the rack (VCU). As a subset of TOC (VOC), HAP's are considered to be included in this number.
- 8 581,037,000 gal total facility max throughput loaded from gasoline, ethanol and diesel * .0835lbs/1000 gals
- 9 TAP considered as Ethyl Alcohol only, existing source emissions are listed as HAP

Emission calculations for NO_x and CO from combustion at the loading rack are derived from manufacturer supplied emission factors. NO_x emissions are calculated at 4 mg/l (.0334 lbs/1000 gal loaded) and CO is assumed 10 mg/l (.0835 lbs/1000gal loaded). Particulate matter and sulfur dioxide emissions from gasoline vapor combustion are assumed to be negligible. Per AP-42 Section 13.5-1, heavily smoking flares have particulate concentration less than 1.0 micrograms per cubic meter. This VCU is designed to be smokeless, therefore emissions of particulate matter are presumed to be less than 1.0 µg/cubic meter. Since TAP emissions are a component of HAP emissions, there is overlap. For this project Sinclair has listed TAP emissions as specifically Ethyl Alcohol.

Creation of PAC's (PAH) and other HAP's in the flame zone is briefly addressed with research from various entities and included as attachments with this addendum. This discussion is relevant to constituents not previously emitted (or not reduced by combustion). EPA's Guidance for reporting Toxic Chemicals: Polycyclic Aromatic Compounds, lists PAC's from combustion of liquid fuel oil in a boiler as 0.0000165 lb/1,000 gals. Although the application from EPA's guidance is inappropriate for this facility, liquid versus vapor combustion, it gives a sense of the magnitude of the emissions. Taken the entire theoretical throughput of this facility, Gasoline, Ethanol, and Diesel (581,037, 000 gals) x 0.0000165lb/1000 gals = 9.6 lbs PAH per year or 0.0263 lbs/day. IDAPA 58.01.01 585 lists POM as a combination of several HAP's including Benzo(a)pyrene and an hourly EL as 9.1E-5. Using the preceding example of liquid combustion in a boiler, burning 581,037,000 gals of fuel oil – total PAH could = 0.0011lbs/hr. The fact that this project involves only vapors, and that VCU's are designed to destroy VOC emissions at a very high rate (95 to 98%), Sinclair believes the conclusion that HAP emissions after the VCU are insignificant, to be valid. A search of EPA emission factors, API (American Petroleum Institute), and NPRA (National Petrochemical & Refiners Association) produced no relevant emission factors for by products of combustion from gasoline and diesel loading. Also reviewed were technical review documents from several states for similar permitting projects (MT, KY, CO, & MO). All of these technical documents address by products of combustion from the VCU's, however, none required individual component assessment. All are classified as "negligible" or "insignificant" etc. Included as an attachment to the addendum are the

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summary results of the compliance test performed on this VCU, in December of 2007 at the previous location.

TABLE 58.01.01.585

Constituent	E/L lbs/hr	Under E/L
Cyclohexane	70	Yes
Ehtylbenzene	29	Yes
Hexane	12	Yes
Naphthalene	3.33	Yes
Toluene	25	Yes
224 trimethylpentane	23.3	Yes
Xylene's	29	Yes
Benzene	.0008	Yes ^A
Formaldehyde	.00051	Yes ^A

TABLE USING 10mg/l EMISSION FACTOR FROM 2007 SOURCE TEST AND THROREITICAL MAX LOADING RATE. (2.5 LBS/HR TOTAL ORGANIC CARBON)
 A. SEE DISCUSSION BELOW

Table 58.01.01.585 lists common HAP's speciated from EPA's TANKS program and Formaldehyde. The VCU is designed for 320 scfm – or 19,200 cf/hr. The loading rack however is unable to reach 30,000 gals /hr loading capacity. Design constraints, pump speeds, card reader inputs etc. limit how many trucks can be loaded in an hour. According to the Terminal Manager, 3 trucks /hr has never been accomplished. Rounding up for tanker volume, 3 trucks @ 10,000 gallons each /hr = 30,000 gallons /hr loaded (theoretical). Using a conversion of 1 gallon = 0.1337 cubic foot and a one for one displacement of air space delivered to the VCU, yields approximately 4,010 cu ft /hr to the VCU. Per AP-42, Table 1.4-3, the emission factor for Formaldehyde, combusting Natural Gas is 0.075 lbs/MMCF. Using max theoretical loading, 4,010 cu/ft / 1,000,000 = 0.00401 MMcf x .075 lbs formaldehyde/MMcf = 0.00030 lbs formaldehyde / hr from the VCU. This rough calculation yields results below the screening level.

Additionally, based on the typical stack test result from this VCU (10 mg/l TOC) we expect less than 2.5 lb/hr total TOC (10mg/l TOC = 0.0834 lbs /1,000 gals, 30,000 gals/hr x .0834 /1000 = 2.5 lbs/hr TOC)

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4.6 TOTAL TAP EMISSIONS FROM UNITS THAT INCREASE TAP'S

TAP	Ethanol tanks TPY	VCU	Component leaks	Emissions lb/hr	Screening level lb/hr	Below screening level?
Ethyl Alcohol	1.14	Counted as VOC	Insignificant	.26	125	YES
Products of combustion from VCU	n/a	Insignificant	n/a	Insignificant	n/a	YES

9 YES/NO statement of fact 12/29/2008

4.7 MODELING

The emissions increases of criteria pollutants are from NO_x and CO. NO_x is 9.7 TPY and CO is 24.26 TPY, both numbers are PTE. CO emissions are below screening thresholds of 14 lbs/hr (project emissions are 5.54 lbs/hr and 2.21 lb/hr for CO and NO_x respectively). NO_x emissions are screened using EPA's SCREEN3 and compared to NAAQS. Screening consisted of the VCU only because there are no other sources of NO_x at the facility. Inputs are; flat terrain downwash, distance of 10 to 500m, rural land use, and regulatory defaults for mixing and anemometer height of 10m. Technical specifications are from the manufacturer John Zink (JZ). Following the screen inputs yields;

TITLE – enter

P for Point – enter

$$\text{Emission rate} = (9.7 \text{ TPY} * 2000 \text{ lb/ton}) / 8760 = 2.21 \text{ lbs/hr} * (454 \text{ g/lb}) / (3600 \text{ sec/min}) = 0.279 \text{ g/sec}$$

STACK HEIGHT = 10.67M (JZ)

STACK IN. DIA. = 2m (JZ)

EXIT VELOCITY = 30 ft/sec (JZ)

EXIT TEMP. = 1,000F (JZ)

AMBIENT AIR = 50 F (From EPA TANKS program, Boise ID)

RECEPTOR HEIGHT = 0 (PER Kevin Schilling – IDEQ)

RURAL = R

DOWNWASH = Y

DIMENSIONS OF BLDG = 3, 10, 15

COMPLEX TERRAIN = N

TERRAIN ABOVE STACK BASE = N

FULL MET (Any Met data from user input, based on TANKS)

APPENDIX B – AMBIENT AIR QUALITY IMPACT ANALYSES

MEMORANDUM

DATE: May 21, 2010

TO: Dan Pitman, Air Quality Engineer, Air Program

FROM: Kevin Schilling, Stationary Source Modeling Coordinator, Air Program

PROJECT NUMBER: P-2010.0033

SUBJECT: Modeling Review for the Sinclair Transportation Company Permit to Construct Application for the Ethanol Blending Project at the Sinclair Burley Products Terminal, Located in Burley, Idaho

Sinclair Transportation Company submitted an air impact analysis for pollutant impacts resulting from operation of a proposed flare at their Sinclair Burley Products Terminal. Estimated potential emissions were modeled by the applicant using SCREEN3.

Modeling methods were discussed with DEQ modeling staff prior to the application and it appears those methods were used in the submitted analyses. DEQ modeling staff is accepting the submitted analyses as true, accurate, and complete, without detailed review, based on the following:

- 1) Estimated emissions were below modeling thresholds for all pollutants except NO_x, with NO_x emissions at 9.7 tons/year and a discretionary NO₂ threshold of 7 tons/year. If a NO₂/NO ratio of 0.75 is conservatively assumed, the NO₂ emissions would be 7.3 tons/year. Since the modeling thresholds are designed to assure impacts are below the significant contribution levels (1.0 µg/m³ annual average for NO₂), and because the flare is essentially the only NO₂ source at the facility, DEQ is confident that emissions from the flare will not result in a violation of the 100 µg/m³ NAAQS.
- 2) Modeled NO₂ impacts were estimated by the applicant at 0.11 µg/m³, which is well below either a significant contribution level or the NAAQS.
- 3) The proposed source is very common in the industry, and seldom are pollutant impacts unacceptable for operation of such sources at similar facilities.
- 4) DEQ work load of modeling staff is currently quite high, and such limited resources are better allocated to other projects.

Since the modeling staff is accepting the submitted analyses as true, accurate, and complete without additional review, it is also concluded that the ambient air impact analyses demonstrated to DEQ's

satisfaction that emissions from the facility will not cause or significantly contribute to a violation of any air quality standard, as required by Idaho Air Rules Section 203.02.

APPENDIX C – FACILITY DRAFT COMMENTS

The following comments were received from the facility on June 7, 2010:

Facility Comment: Sinclair requested to change the numbering of the new ethanol storage tanks from what was in their original application. Sinclair requested that tanks 400, 401, 402 as specified in their application be changed to 410, 411, and 412.

DEQ Response: DEQ granted this change. The new ethanol tanks are now numbered as 410, 411, and 412 throughout the permit and statement of basis.

Facility Comment: Sinclair commented that actual size of the Transmix tank capacity is actually 6,000 gallons not 3,808 gallons as listed in Facility Draft Permit Table 1.

DEQ Response: DEQ corrected the Transmix tank size as requested.

Facility Comment: Sinclair requested to delete the 250,000 gallon per day allowable gasoline throughput for the loading racks.

DEQ Response: Sinclair's original permit application limited gasoline throughput of the loading racks to less than 250,000 gallons per day in order to avoid some MACT requirements. Based on Sinclair's new request the 250,000 gallon daily throughput limit has been removed from the permit. The gasoline throughput remains unchanged from what was previously permitted.

Facility Comment: Sinclair commented that there are MACT Subpart BBBBBB requirements that must be added to the permit in light of changing their request to have gasoline throughput at the loading racks greater than 250,000 gallons per day.

DEQ Response: DEQ granted this request and has included all MACT Subpart BBBBBB that apply when gasoline throughput of the loading racks exceed 250,000 gallons per day.

Facility Comment: Sinclair commented that Gasoline and Distillate Loading Rack permit section may be a good place to add the compliance assurance monitoring plan (CAM) that was submitted. Sinclair stated that the CAM plan is required to satisfy the requirements of 63.11092(b)(2)(B)(1) and (2).

DEQ Response: CAM plans are only required for Tier I (Title V) facilities; MACT standards do not require CAM plans. Sinclair has requested that the current Tier I (Title V) operating permit be cancelled because the facility's potential to emit will be below Tier I major source thresholds. Since the facility's potential to emit will be below major source thresholds upon issuance of this permit to construct CAM is not applicable to Sinclair.

The MACT Subpart BBBBBB citation provided by Sinclair does not exactly match any provisions of that rule. It appears that the citation that Sinclair may have intended to refer to is 63.11092(b)(1)(iii)(B)(1) and (2). These sections of the regulation may apply to Sinclair as an alternative to those that are specifically expressed in the regulation. However, Sinclair did not address this section of the regulation in form FRA which is required to be submitted to address the Federal Requirements Applicability indicating that this option is not being sought.

Section 63.11092(b)(1)(iii)(B)(1) and (2) requires the owner or operator to develop and submit to the Administrator a monitoring and inspection plan which is different than the CAM plan that was submitted. If Sinclair is in fact going to pursue this option of the regulation the monitoring and inspection plan must be submitted to the Administrator of EPA for approval not to DEQ because DEQ has not been delegated MACT Subpart BBBBBB.

APPENDIX D – PROCESSING FEE

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Sinclair
Address:
City: Burley
State:
Zip Code:
Facility Contact: Curtis Rice
Title:
AIRS No.: 031-00026

N Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

Y Did this permit require engineering analysis? Y/N

N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	9.7	0	9.7
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM10	0.0	0	0.0
VOC	0.0	340.6	-340.6
TAPS/HAPS	0.0	7	-7.0
Total:	0.0	347.6	-337.9
Fee Due	\$ 1,000.00		

Comments: HAP emissions reduction is a educated guess, the actual reduction is not needed to accurately assess the processing fee- overall the facility will have a significant reduction in emissions of pollutants for which fees must be paid.

