ENGINEERING EVALUATION

Facility ID No. 111865
Richmond 1001 Petroleum Inc #111865
1001 Cutting Blvd, Richmond, CA 94804
Application No. 732101

BACKGROUND

The applicant has requested to modify the Permit to Operate for the following equipment:

S-1 Gasoline Dispensing Facility

The facility configurations are described below:

Current Configuration	Post Construction
3 – 10k UST	2- 18k Split (18k/87) & (10k/91 & 8k/E85)
Phase I OPW EVR (VR-102)	No change
None	Phase I OPW (VR-102) E85
Phase II Balance EVR Veeder-Root Vapor Polisher (VR-203)	Phase II Balance EVR Veeder-Root Vapor Polisher & Veeder-Root ISD (VR-204)
None	E-85 Phase II Exempt Per Reg 8-7-112.3
10 Triple Product Gasoline Nozzles	No change
None	8 – E85 Nozzles
6k UST Diesel	No Change
2 Diesel Nozzles	4 Diesel Nozzles
600,000 gasoline per year throughput limit	1.5 Million gallons of gasoline per year throughput limit; 192,000 E85 limit

The facility is requesting an increase of 900,000 gallons in gasoline throughput to 1.5 million gallons per year and 192,000 gallons of E-85. The project involves increasing the gasoline throughput from 600,000-gallons to 1.5 million gallons per year, adding a 192,000-gallon E-85 throughput, replacing three USTs and dispensers: 3-10k, w/ 2-18k split (18k/87) & (10k/91 & 8k E85 with 8 E85 nozzles and adding 2 additional diesel nozzles. In addition to upgrading the TLS 350 to TLS 450 Plus and adding In Station Diagnostic, ISD (Veeder-Root ISD VR-204)

This application is being processed as a modification as defined in Regulation 2-1-234.

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EMISSION CALCULATIONS

The owner submitted the following throughput levels for the past 3 years:

Table 1. Historic Material Throughput

Year	Throughput Level gallons per year
2022	N/A
2023	1,862,971
2024	1,568,518

Table 2 summarizes annual and daily permitted emissions.

Table 2. Annual and Daily Emissions

Criteria Pollutant	Fuel	Emissions Factors (lb/thousand gallon)	Annual Average Emissions (lbs/day)	Annual Emissions (lbs/year)	Annual Emissions Tons/Year
POC	Gasoline	0.302	1.24	452.82	0.23
POC	E-85	1.056	0.56	202.66	0.10

Basis:

- Annual Throughput of Unleaded Gasoline: 1.5million gallons per year
- Annual Throughput of Ethanol: 192,000-gallons per year
- Operation schedule: 24 hr/day (max), 24 hr/day (typical), 7 day/week, 52 week/yr
- Phase I EVR for gasoline UST
- Phase I EVR for E85 UST
- Phase II EVR for gasoline UST
- No Phase II for E85 UST (Dispensing of gasoline at facilities where the APCO determines in writing that Phase II vapor recovery is not feasible).
- POC is Precursor Organic Compound.
- Emissions of POC include emissions from loading, breathing, refueling and spillage
- Emission factors are taken from the California Air Resources Board's "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities" (12/23/13).

FACILITY CUMULATIVE INCREASE

Table 3 summarizes the cumulative increase in criteria pollutant emissions that will result from this application.

Table 3. Facility Cumulative Emissions Increase, Post 4/5/91

Cumulative Increase	Existing Emissions (ton/yr)	Application Emissions (tons/yr)	Total Emissions (tons/yr)
POC	0.09	0.24	0.33

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TOXIC EMISSIONS AND HEALTH RISK ASSESSMENT (HRA)

A Health Risk Assessment (HRA) is required when the emissions of toxic air contaminants (TACs) are at or exceed the trigger levels outlined in Regulation 2, Rule 5, Table 2-5-1. On August 20, 2025, prior to the latest revision of the emission calculation spreadsheet,11/25. A HRA was required, based on the toxic emissions for this source, summarized in Table 4.

Table 4. Toxic Emissions

TACs	Category	Emissions (Chronic) (lb/yr)	Emissions (Maximum) (lb/hr)	Reg 2-5 Chronic Trigger (lb/yr)	Reg 2-5 Acute Trigger (lb/hr)	HRA Required
Benzene	Both Carcinogen and Other	2.570	0.01293	2.9	0.012	Yes
Ethylbenzene	Both Carcinogen and Other	1.786	0.00702	33	n/a	No
Hexane	TAC - Other	9.242	0.04823	270000	n/a	No
Naphthalene	Both Carcinogen and Other	0.186	0.00063	2.4	n/a	No
Propylene	Both Carcinogen and Other	0.007	0.00005	120000	n/a	No
Toluene	TAC - Other	10.411	0.04555	16000	2.2	No
Xylene	TAC - Other	7.312	0.03277	27000	9.7	No

Basis:

- Emission factors are taken from the California Air Resources Board's "Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities" (12/23/13).
- Composition Data is from ARB Organic Gas Speciation Profiles for E10 Gasoline Fuels (Liquid and Headspace for both Summer and Winter blends), revised 2013 and 2015
- Hourly emissions are calculated in accordance with BAAQMD's Air Toxics NSR Program HRA Guidelines for GDFs, dated December 2016.

Health Risk estimates were calculated in accordance with BAAQMD's Air Toxics NSR Program HRA Guidelines for Gasoline Dispensing Facilities, dated December 2016. The assessment was performed for this facility using site specific land use data and the report is attached to this application. Results are summarized in Table 5.

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Table 5. Maximum Project Risk

Receptor	Cancer Risk	Chronic Non-Cancer Hazard Index
Resident	0.40 chances in a million	0.00018
Worker	0.05 chances in a million	0.0026
Student Nystrom Elementary	0.013 chances in a million	0.00031
Student Richmond College Prep	0.0052 chances in a million	0.00012

STATEMENT OF COMPLIANCE

The owner/operator is expected to comply with all applicable requirements. Key requirements are listed below:

California Environmental Quality Act (CEQA), Regulation 2-1-311

This permit application is not subject to the California Environmental Quality Act (CEQA) because the Air District's evaluation is a ministerial action (Public Resources Code Section 21080(b)(1) and CEQA Guidelines Section 15268(a)) conducted using the fixed standards and objective measurements in the Air District's rules and regulations.

Public Notification, Regulation 2-1-412
The public notification requirements of Regulation 2-1-412 apply to applications which result in any increase in toxic air contaminants or hazardous air contaminant emissions at facilities within, either 1,000 feet of the boundary of a K-12 school or an Overburdened Community.

The facility is located within 1000 feet of the outer boundary of Nystrom Elementary located at 230 Harbour Way S and Richmond College Prep School located at 251 S 12th Street in Richmond, and therefore subject to public notification requirements. It is also located within an Overburdened Community, and triggered a Health Risk Assessment and therefore subject to the public notification requirements

The public notice has been prepared and sent to all addresses within 1,000 feet of the proposed source and to the parents or guardians of students enrolled at the schools.

Best Available Control Technology (BACT), Regulation 2-2-301
Because this GDF will emit less than 10 pounds of POC per day, the facility is not required to install BACT.

Offsets, Regulation 2-2-302
Because the total facility potential to emit will be less than 10 tons of POC per year, the facility is not required to provide offsets.

Best Available Control Technology for Toxics (TBACT), Regulation 2-5-301
The expected increased health risk from this project will not exceed 1 per million, thus TBACT requirement is not triggered.

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Project Risk Requirement, Regulation 2-5-302
HRA results show that the increased cancer risk does not exceed 6 in one million, the chronic and acute hazard indexes do not exceed 1, and therefore the project complies with the project risk requirement.

District Rules (Limits to emissions of pollutants or performance standards)
Regulation 8-7 (Organic Compounds – Gasoline Dispensing Facilities)
Section 8-7-301 – Phase I Requirements
Section 8-7-302 – Phase II Requirements
Section 8-7-304 – Certification Requirements

California Air Resources Board (CARB) Vapor Recovery Certification
Phase I and Phase II Vapor Recovery System Executive Orders VR-102 and VR-204.

Airborne Toxic Control Measure for Benzene for Retail Service Stations
ATCM, 5/13/1988, Section 93101, Title 17, CA Code of Regulations.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)
40 CFR 63, Subpart CCCCCC *(Gasoline Dispensing Facilities)*

CONDITIONS

Authority to Construct Conditions

This GDF is subject to the following Construction Conditions:

100608 - The owner/operator shall install, operate, and maintain the Phase I Vapor Recovery System in accordance to its CARB Executive Order as specified in Condition 100015 and the corresponding System Installation, Operation and Maintenance Manual.

100609 - The owner/operator shall install, operate, and maintain the Phase II Vapor Recovery System in accordance to its CARB Executive Order as specified in Condition 100016 and the corresponding System Installation, Operation and Maintenance Manual.

100612 - The owner/operator shall ensure the following: (1) The E85 tank shall not be connected to the underground gasoline vapor return piping. It shall be equipped with a dedicated vent line that shall not be manifolded or connected in any way to the gasoline vapor vent piping. (2) All nozzles, breakaways and hoses shall be non-vapor recovery models compatible with E85 product.

Start-up Conditions

This GDF is subject to the following Start-up Conditions:

100613 - The owner/operator shall ensure the performance tests are successfully conducted at least ten (10) days, but no more than thirty (30) days after start-up. To comply with this condition, all tests shall be conducted after back-filling, paving, and installation of all required Phase I and Phase II components.

100614 - The owner/operator shall ensure the Phase I vapor recovery system tests are successfully conducted in accordance with the latest version of CARB Executive Orders as specified in Condition 100015.

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100615 - The owner/operator shall ensure the Phase II vapor recovery system tests are successfully conducted in accordance with the latest version of CARB Executive Orders as specified in Condition 100016.

100616 - Static Pressure Performance Test using CARB Test Procedure TP-201.3.

100617 - One of the following tests is applicable. The measured leak rate for each component shall be within the limits set in the applicable CARB Executive Order:

(1) Stations equipped with drop tube overfill prevention devices ("flapper valves"):

a. Drop Tube Overfill Prevention Device and Spill Container Drain Valve Leak Test in accordance with CARB Test Procedure TP-201.1D and the applicable CARB Executive Order.

(2) All other stations: a Drop Tube/Drain Valve Assembly Leak Test in accordance with CARB Test Procedure TP-201.1C and the applicable CARB Executive Order.

100618 - Phase I Adaptor Static Torque Test on all rotatable Phase I adaptors in accordance with CARB TP-201.1B and the applicable CARB Executive Order.

100619 - (E85 Tank) Static Pressure Performance Test using CARB Test Procedure TP-201.3.

100620 - (E85 Tank) One of the following tests is applicable. The measured leak rate for each component shall be within the limits set in the applicable CARB Executive Order:

(1) Stations equipped with drop tube overfill prevention devices ("flapper valves"): a Drop Tube Overfill Prevention Device and Spill Container Drain Valve Leak Test in accordance with CARB Test Procedure TP-201.1D and the applicable CARB Executive Order.
(2) All other stations: a Drop Tube/Drain Valve Assembly Leak Test in accordance with CARB Test Procedure TP-201.1C and the applicable CARB Executive Order.

100621 - (E85 Tank) Phase I Adaptor Static Torque Test on all rotatable Phase I adaptors in accordance with CARB TP-201.1B and the applicable CARB Executive Order.
100622 - Dynamic Back Pressure Test using CARB Test Procedure TP-201.4.
100625 - Liquid Removal Test.
100626 - Vapor Pressure Sensor Verification Test.
100629 - Veeder-Root Vapor Polisher Operability Test.
100630 - Veeder-Root Vapor Polisher Emissions Test.
100635 - Nozzle Bag Test on all nozzles.
100636 - ISD Operability Test applicable to the manufacturer.

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Operating Conditions

This GDF is subject to the following Operating Conditions:

Condition Number	Condition Type
100013	Operational, Annual Throughput Limit
100015	Vapor Recovery System, Phase I
100016	Vapor Recovery System, Phase II
100036	Source Testing Notification
100037	Source Testing, Phase I
100043	Source Testing, Phase II
100051	Record Keeping
100088	E85 Dispensing

RECOMMENDATION

The District has reviewed the material contained in the permit application for the proposed project and has made a preliminary determination that the project is expected to comply with all applicable requirements of District, state and federal air quality-related regulations. The preliminary recommendation is to issue an Authority to Construct for the equipment listed below. However, the proposed source will be located within 1000 feet of a school which triggers the public notification requirements of District Regulation 2-1-412. After the comments are received and reviewed, the District will make a final determination on the permit.

I recommend that the District initiate a public notice and consider any comments received prior to taking any final action on issuance of an Authority to Construct/Permit to Operate to change permit conditions for the following source:

S-1 Gasoline Dispensing Facility

By: Sheryl Wallace, Senior Air Quality Permit Technician Date: 12/1/2025

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