

DRAFT ENGINEERING EVALUATION

Facility ID No. 111724
ARCO AM/PM
3010 Mount Vista Drive, San Jose, CA 95127
Application No. 647125

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	Configuration after Modification
3 – gasoline USTs 1 - 12,000 gallon and 1-12,000 Split tank (2 – 6,000 gallon)	No change
Phase I OPW EVR (VR-102)	No change
Phase II Balance EVR with Veeder Root Vapor Polisher (VR-203)	Phase II Balance EVR with Veeder Root Vapor Polisher and Veeder-Root ISD (VR-204)
8 triple product gasoline nozzles	No change
600,000 gallons per year throughput limit	6.4 million gallons per year throughput limit

This project involves removing and replacing the dispensers and associated piping, relocate existing vent/sump stack and adding Veeder -Root ISD to Phase II Vapor Recovery System per VR-204. The facility is requesting a throughput increase from 600,000 gallons of gasoline per year to 6.4 million gallons of gasoline per year.

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

EMISSION CALCULATIONS

Table 1 summarizes annual and daily permitted emissions.

Table 1. Annual and Daily Emissions

Criteria Pollutant	Emissions Factors (lb/thousand gallon)	Annual Average Emissions (lb/day)	Annual Emissions (lb/year)	Annual Emissions (ton/year)
POC	0.516	9.04	3301.25	1.65

Basis:

- Annual throughput of Unleaded Gasoline: 6.4 million gallons per year
- Operation schedule: 24 hr/day (max), 24 hr/day (typical), 7 day/week, 52 week/yr
- Phase I EVR for UST
- Phase II EVR for UST
- 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 2 summarizes the cumulative increase in criteria pollutant emissions that will result from this application.

Table 2. Facility Cumulative Emissions Increase, Post 4/5/91

Cumulative Increase	Existing Emissions (ton/yr)	Application Emissions (tons/yr)	Total Emissions (tons/yr)
POC	0.25	1.40	1.65

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. An HRA is required, based on the toxic emissions for this source, summarized in Table 3.

Table 3. 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	18.584	0.01100	2.90	0.06	Yes
Ethylbenzene	Both Carcinogen and Other	21.042	0.00672	33.00	n/a	No
Hexane	TAC - Other	59.220	0.04031	270000.00	n/a	No
Naphthalene	TAC - Other	2.578	0.00065	2.40	n/a	Yes

Toluene	TAC - Other	104.662	0.04173	12000.00	82.00	No
Xylene	TAC - Other	106.867	0.03234	27000.00	49.00	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 4.

Table 4. Maximum Project Risk

Maximally Exposed Receptor	Cancer Risk	Chronic Non-Cancer Hazard Index
Resident	7.2 chances in a million	0.041
Worker	1.6 chances in a million	0.018

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 CEQA because the evaluation is a ministerial action conducted using the fixed standards and objective measurements outlined in the Permit Handbook Chapter 3.2. The Procedures for Ministerial Evaluation (Section 2-1-427) and Criteria for Approval of Ministerial Permit Applications (Section 2-1-428) have been complied with in the determination that this application is exempt from CEQA.

Public Notification, Regulation 2-1-412

The facility is located within 1000 feet of the outer boundary of Thomas More School located at 1565 South White Road San Jose, CA 95127 and therefore is subject to the public notification requirements

A public notice will be sent to all addresses within 1,000 feet of the proposed source and to the parents or guardians of students enrolled at the school, and the following schools within ¼ mile of the source: Terra Marin School and Edna Maguire Elementary School.

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.

Toxic Air Contaminants, Low Emission Levels Exemption, Regulation 2-5-110

This project is not subject to Regulation 2, Rule 5 because toxic air contaminant emissions are below the acute and chronic trigger levels listed in Table 2-5-1.

Best Available Control Technology for Toxics (TBACT), Regulation 2-5-301

The expected increased health risk from this project will exceed 1 per million, thus TBACT requirement is triggered. TBACT for GDFs requires the use of CARB certified Phase I and Phase II vapor recovery equipment.

Project Risk Requirement, Regulation 2-5-302

HRA results show that the increased cancer risk does not exceed 10 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:

1. The owner/operator shall install, operate, and maintain the Phase II Balance EVR with Veeder-Root Vapor Polisher and Veeder-Root ISD in accordance with CARB Executive Order VR-204 and the corresponding System Installation, Operation and Maintenance Manual.

Start-up Conditions

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

1. 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.

2. The owner/operator shall ensure the following vapor recovery system tests are successfully conducted in accordance with the latest version of CARB E.O. VR-102 and VR-204:
 - a. Static Pressure Performance Test using CARB Test Procedure TP-201.3.
 - b. Dynamic Back Pressure Test using CARB Test Procedure TP-201.4.
 - c. 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:
 - o 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.
 - o 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.
 - d. Liquid Removal Test.
 - e. Vapor Pressure Sensor Verification Test.
 - f. Veeder-Root Vapor Polisher Operability Test.
 - g. Veeder-Root Vapor Polisher Emissions Test.
 - h. Nozzle Bag Test on all nozzles.
 - i. ISD Operability Test applicable to the manufacturer.

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

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/Permit to Operate 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

Prepared by: Vanessa Hodgson, Air Quality Technician Date: XX/XX/XXXX

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